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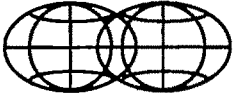
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TRANSFORMATIONS OF THE EMPLOYMENT STRUCTURE AS AN EXPRESSION OF THE TRANSFORMATION OF POLISH INDUSTRY AGAINST THE BACKGROUND OF THE EUROPEAN UNION

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ABSTRACT. Global social and economic changes, connected mainly with globalization processes, have an impact on changes both in present spatial and division structures of the industry and in its functions in the economic development of various spatial systems. The aim of the paper is to analyze changes in the industry's role in the Polish economy during the period of economic transformation and European integration based on its share in the employment structure. These changes are set against transformations in other EU countries, diversification and transformations of the division structure of employment in Polish industry and the similarity of the Polish employment structures to the EU countries as an expression of transformation processes. The analyzed processes are stimulated by the international environment and a change in national conditions for the socio-economic development.

KEY WORDS: Poland, EU countries, transformation, industry, employment structure.

INTRODUCTION

Modern global social and economic changes, connected mainly with moving from the industrial through the post-industrial to the information stage of the civilization development as well as with growing globalization processes, have an impact on the reconstruction of the sectoral economic structure where industrial activity, being an economic basis in the industrial stage, gives way to service activity. A consequence of this process is a change both in present spatial and division structures of industry and in its functions as regards the economic development of various spatial systems, from local through regional to national and international systems. As is commonly known, in the majority of

highly developed countries industrial activity decreases its function pertaining to activation of labour resources for the service sector, which is, *inter alia*, a consequence of increasing mechanization, automation and computerization of production processes.

This process is noticed by many authors (Daniels, 1991; Schettkat, Yocarini, 2003, 2006; Maroto-Sánchez, Cuadrado-Roura, 2009). From this perspective, the problem of the new role to be played by industry at the information stage of civilization development (Zioło, 2009b), of multiplier effects of the economic development to be generated by it (cf. Wiedermann, 2007, 2008; Domański, Gwosdz, 2008; Rachwał, Wiedermann, 2008) and of reflection in transformations of various population structures, in particular, structures related to professional activity and employment (cf. Marelli, 2004; Rodionova, Sholudko, 2008) seems to be an essential research issue. Transformation of industry has an influence on demographic transformations taking place (Szymańska, Matczak, 2002; Hołowiecka, Szymańska, 2008; Kurek, 2009).

In the light of the outlined rationale, the aim of the paper is to analyze: (a) changes in industry's role in the Polish economy during a period of economic transformation and European integration based on its share in the employment structure against transformations in other European Union countries; (b) diversification and transformations of the division structure of employment in Polish industry and the similarity of the Polish employment structures to those of EU countries as an expression of transformation processes, due to stimuli coming from the international environment and a change in national conditions for social and economic development.

The paper also attempts to evaluate the suitability of the employment indicators for determining industrial potential and of the role of the industrial sector and its individual divisions in the national economy under conditions of moving to the information stage of civilization development. As it seems, the performed analysis fits in well with the current problem of studies on socio-economic geography where problems of transformations of varied population structures under the influence of economic transformations seem to be essential (Szymańska, 2004; Hołowiecka, Szymańska, 2008; Jelonek, 2008).

The analysis covers Poland and, for comparative purposes, other EU Member States. The employment analysis is conducted by sections and divisions according to the 2004 Polish Classification of Activities (NACE, Statistical Classification of Economic Activities in the European Community, Rev. 1.1), valid until 2007, in terms of the number of people employed. The time frame of the analysis covers the years 1995–2007. The source of statistical data is GUS (Główny Urząd Statystyczny, Central Statistical Office) statistical yearbooks and the Eurostat database. In the case of some countries, however, a barrier to access comparable

data was encountered (lack of data or a necessity to use data for 2006, instead of 2007). Due to the data incompleteness or statistical confidentiality it was also necessary to combine certain divisions (e.g., in section C – Mining industry) for analytical purposes. The problem of serious difficulties in access to detailed data on industry development in specific time sections was thoroughly discussed in the author's previous paper (Rachwał, 2008). This research paper also uses current information on shaping economic processes under the conditions of the ongoing worldwide crisis. However, it should be stressed that too little time has elapsed yet to make a thorough evaluation of the impact of this crisis on structural transformations in industry. As is commonly known, this economic sector is characterized by certain 'inactivity' of the structure resulting from, *inter alia*, capital intensity and time consumption of investment processes. Therefore, the so-called 'media clutter' regarding the enormous impact of the economic crisis on the employment level and structures should be treated with great prudence.

For comparative purposes, previous studies on the EU region's industry (Rachwał, Wiedermann, Kilar, 2008a, 2008b, 2009) as well as studies on transformations of Polish industry against the background of Central and Eastern European countries were used (*inter alia*, Domański, 2003, 2006; Rachwał, 2009). The article is limited to the presentation of the most important results of these studies.

CONDITIONS FOR TRANSFORMATION IN THE DIVISION STRUCTURE OF EMPLOYMENT

The process of transformations in the division structure of employment in industry takes place under the influence of various conditions which may be divided into international and national ones. International conditions, related mainly to increasing globalization processes of economic activity include (Rachwał, 2008): (a) integration processes of countries and regions, including the process of European integration; (b) capital concentration processes and integration processes of enterprises leading to a rise in competitive pressure in the global market; (c) increase in importance of international corporations to the global economy (cf. Tobolska, Matykowski, 2006; Zioło, 2009a), including, in particular, IT corporations (Kilar, 2009a, 2009b); (d) strong development of the IT sector entailing a change in traditional factors of location of business activities and leading to shaping creative areas whose importance to social and economic development is growing systematically (Strykiewicz, 2008, 2009); (e) flows of direct foreign investments (directions, size, purpose – motives) and their growing role in social and economic development (cf. Domański,

2001, 2003; Sala, 2006; Tobolska, 2007; Rojeca, Damijan, 2008) leading to delocalization and relocation of enterprises as well as ‘externalization’ of their activity, e.g., in the form of *outsourcing*, *off-shoring*, *spin-off* processes (cf. Fixlera, Siegelb, 1999; Gierańczyk, 2008); (f) fast technological progress (cf. Fagerberg, 2000), particularly in the field of information technology as well as automation and computerization of production processes; (g) growing role of knowledge in management, leading to an increase in importance of advanced research and development works (R&D, Research and Development) and innovations (cf. Ratajczak, 2008; Borowiec, Dorocki, Jenner, 2009; Gierańczyk, 2009); (h) processes of ‘servicization’, ‘softening’ of the industry structure and of an increase in the role of small and medium production entities (cf. Karpiński, 1994; Tkocz, 2007); (i) reduction in the life cycle of products and gradual moving from ‘economies of scale’ to ‘economies of scope’; (j) changes in the consumption model and lifestyle of members of the ‘information society’; (k) in the years 2008–2009: deepening of the global economic crisis and actions taken by governments of various countries for counteracting the social and economic consequences of the crisis.

In the case of Poland and other Central and Eastern European countries, of great importance to transformations of the employment structures are national conditions resulting from the changes in the management system and from the state economic policy, manifesting themselves in, *inter alia*, creating legal instruments, conducted industrial policy, including the process of enterprise privatization as well as creating and implementing a strategy for restructuring specific industry sectors. Therefore, the national conditions include (Rachwał, 2008): (a) implemented legal and administrative regulations related to economic transformation and harmonization of economic law in connection with EU integration; (b) new pro-environmental requirements of production and a necessity to observe stricter environmental standards; (c) speed, scope and paths (legal conditions) of privatization of state-owned enterprises; (d) conditions resulting from implemented strategies for restructuring individual industrial enterprises, whose success, to a large extent, depends on their internal structure and the nature of their relations to their environment on the threshold of economic transformation; (e) opening of the Polish market, including the capital market, to an inflow of foreign entities, goods and capital; (f) scope and instruments of the impact with regard to the economic policy, in particular the industrial policy, also with regard to SEZ (Special Economic Zones) operation (cf. Kitowski, 2007; Smętkowski, 2008); (g) creation and implementation of a strategy for restructuring specific industry divisions; (h) state policy on education, science and implementation of innovations, in particular with respect to the exchange of scientific and research achievements.

CHANGES IN INDUSTRY'S SHARE IN EMPLOYMENT

An analysis of the changes in industry's share in the employment structure from 1995 to 2007 indicates a slow but regular decrease in the role of this sector in activation of labour resources (Fig. 1).

In the years 1995–2007, the share of the industry and building engineering sectors in employment decreased from 31.2% to 29% and of industry itself (sections: C – Mining and quarrying, D – Manufacturing and E – Electricity, gas and water supply) from 25.5% to 23.1%. Two characteristic stages of transformations should be mentioned here – in the years 1995–2001, the share experienced a large decline to 20.8% and then, in the years 2002–2007 it increased. However, it should be noticed that it was highly influenced by the revaluation of agriculture employment data according to the results of the Polish Census.

The relatively small changes during the examined period of time influenced the fact that Poland still belongs to the group of the European Union countries characterized by the high shares of the industry sector in employment. This phenomenon is characteristic of the majority of the Central and Eastern European countries, transforming their economies, which joined the European Union at a later time. However, it may be stated that a downward trend regarding the industry's share in employment is general and refers to all countries (except Latvia

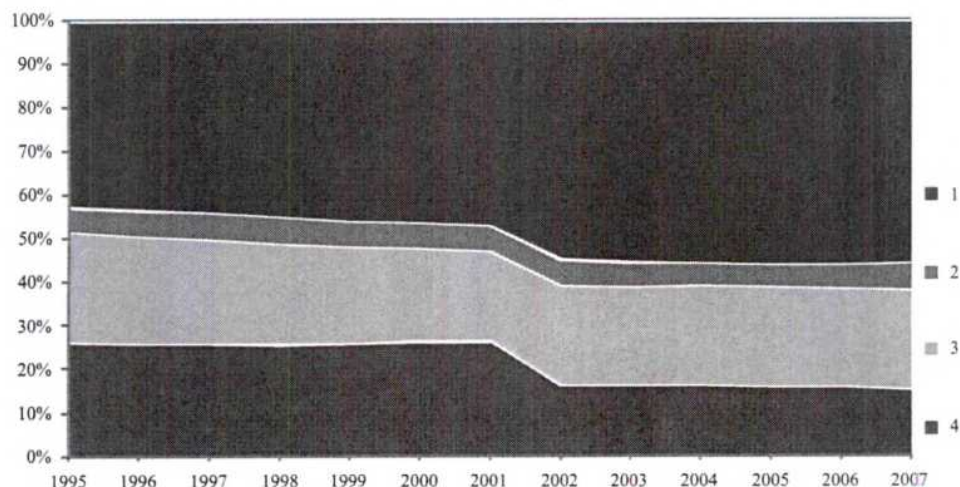


Fig. 1. Polish national economy employment structure in the years 1995–2007

Explanation: 1 – services; 2 – construction; 3 – industry; 4 – agriculture

Source: Own study based on GUS data

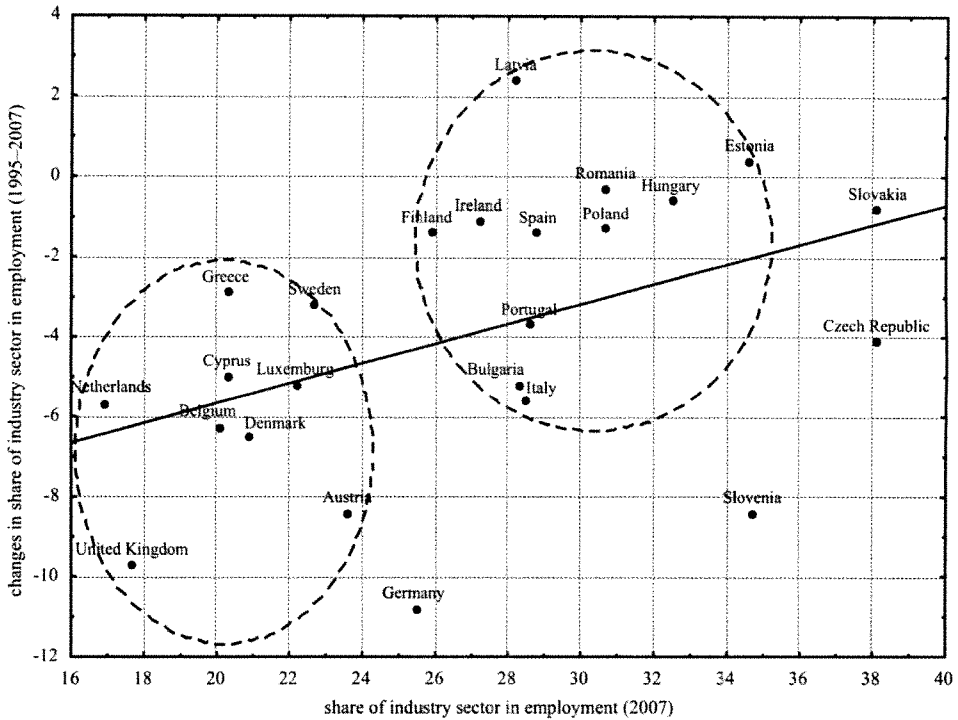


Fig. 2. Relationship between the share of the industry sector in the employment structure and the changes in this share in the EU countries from 1995 to 2007

Source: Own study based on GUS data

and Estonia), which is not surprising as this regularity was observed many years before and formulated in the so-called three sector theory (Fisher, 1935; Clark, 1940; Fourastié, 1949). However, an interesting thing is the diversification as to the scale of the changes. As is indicated by an analysis of relationships between the size of industry's share in employment and the changes in this share during the examined period of time, the largest declines were noted in the countries which already have relatively low shares of industry in employment (Fig. 2). They are mainly the countries of the so-called 'old' EU-15, including the EU core countries such as Germany or the United Kingdom. In the countries which joined the EU at a later time (including also Ireland, Spain, Finland) this decline is smaller.

Although, in general, industry's share in national employment rates is declining in almost all analyzed countries, which is related to production mechanization and elimination of the labour force in industry as well as to relocation of activity. A previous analysis of this phenomenon by regions shows that in many European regions, also those of the so-called 'old' Europe, this share is high and is either

declining insignificantly or still growing (cf. Rachwał, Wiedermann, Kilar, 2008a, 2008b, 2009). It should be noted that the situation is similar in the case of industry's share in the gross value added (GVA). When adopting GVA as an indicator of industry's role in the economy, it is necessary to note its great importance to many regions indicated by the fact that industry's share in GVA is higher than industry's share in employment. However, it should be stressed that contrary to commonly held opinions the increase in industry's share in GVA is not so rare in EU regions as it may be expected and refers to, for example, many regions of Germany or Austria. Most regions with long-term traditions and with a great role of industry as well as regions of dynamically developing countries, such as Ireland and Spain, still strengthen the potential of this sector, which means that a hypothesis put forward in numerous papers and regarding common processes of deindustrialization of Europe cannot be agreed with.

Thus, transformations of the industrial potential measured by means of the number of persons employed and gross value added are rather a confirmation of reindustrialization processes where labour-consuming industry gives way to knowledge-consuming industries characterized by the higher value added, which reduces the decreasing role of industry in direct activation of labour resources. This is the more and more visible feature of the industry of the so-called new economy, which was revealed by many authors, including K. Kuciński (2007), stressing that the changing importance of industry to the economy as well as related economic, social and spatial implications do not mean processes of deindustrialization and elimination of industry from the structure of economic macrosystems. Therefore, it is necessary to agree with the author (Kuciński, 2007: 208) that 'we may speak of deindustrialization when industry's share in creating the value added and national product, export value, investment outlays and employment declines significantly and with respect to employment it is not only relative but also absolute'. In the majority of European countries such changes may not be stated.

It should be noted that applying only the employment indicator for analyzing the changes in industry's role in the economy, although still commonly used, is not the best solution. It is necessary to take other indicators into account and to conduct analyses of the changes in the industrial potential and its role in the economy based on a synthetic indicator, for the calculation of which, apart from the employment size, also, for example, the gross value added is adopted (or any other indicator illustrating economic effects of industrial activity, e.g., value of sold production). An advantage of this approach is that its value is influenced by both the number of persons employed being of significant importance in the case of labour-consuming industries and the gross value added (or the value of sold production), which better illustrates the more technologically advanced

industries, with large outlays on research and development works. In a situation where industry stops performing its leading function with regard to activation of labour resources, relying on only one commonly-used employment indicator seems pointless as this approach would emphasize countries or regions where labour-consuming industry is predominant, while the importance of more modern industries, with great production mechanization and automation, characterized by the high value added and characteristic of the most developed EU countries or regions, would be minimized (Rachwał, Wiedermann, Kilar, 2008b). In addition, it should be noted, quoting K. Kuciński (2007), that reduction in employment in industry and the related process of so-called ‘servicization’ of the economy partially results from a striving of enterprises for higher economic effectiveness through outsourcing the implementation of a part of processes to specialized service business entities. As a consequence, the business activity which has been an integral part of the industrial sector so far becomes a component of the service sector.

CHANGES IN THE DIVISION STRUCTURE OF EMPLOYMENT IN INDUSTRY

As the analysis of the data of the industry employment structures by sections indicates, during the examined period Polish industry employment size decreased from 3.7 to 3.1 million. However, in the years 2000–2007 a small increase in the number of persons employed in industry was observed, as a consequence of an increase in employment in section D – Manufacturing (Fig. 3). In the case of other sections (C – Mining and quarrying, and E – Electricity, gas and water supply) a significant decrease in the number of persons employed was observed, although the role of these sections in employment in industry is not as important as that of manufacturing. An analysis of the diversification of industry employment structures by sections, by virtue of the nature of the valid classification, does not allow a more precise evaluation of the changes in the employment structures.

To capture the structural changes in employment in industry it is necessary to perform an analysis at the division level. The largest number of persons is employed in the divisions of ‘manufacture of food products and beverages’, ‘manufacture of machinery and equipment’ and, in recent years, also ‘manufacture of metal products’ (Fig. 4). A relatively great role is played by the mining industry (included in the analysis as all four divisions of section C – Mining and quarrying, as the coal mining industry gathers more than 90% of the employment potential, thus, further divisions are of no importance). Modern production divisions, e.g., DL30, 32, 33 are characterized by the relatively low employment potential.

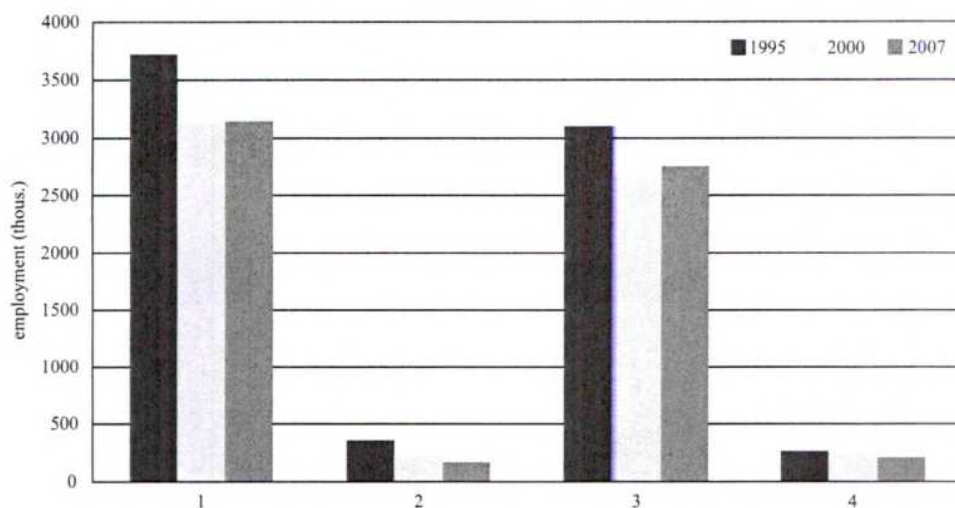


Fig. 3. Employment in industry in Poland by sections in the years 1995, 2000, 2007
 Explanation: 1 – industry (total); 2 – section C (mining and quarrying); 3 – section D (manufacturing); 4 – section E (electricity, gas and water supply)

Source: Own study based on GUS data

An analysis of the dynamics of the changes in employment in industry by divisions shows an almost double rise of employment in the division of 'manufacture of office machinery and computers' and 'recycling'; however, we must be aware of the minimal importance of these divisions to the employment potential (Fig. 5). These growths could be easy to be achieved as employment in the base year was very low and opening one larger factory with employment of more than one thousand people has a significant impact on the rise of the indicator. The largest employment declines, up to 50%, were observed in the traditional industry divisions, e.g., mining industry, textile industry, production of clothes, leather, and leather products. It is an obvious consequence of the decreasing role of hard coal and lignite in the economy and of the fact that Poland is systematically losing its position of a country with low production costs, which in the case of textile and clothes production is of decisive importance.

The changes in the employment size in the individual divisions have been reflected in the changes in the employment structure where we may still observe the high share of the food industry and of the machinery and device industry but there is a significant decline in the importance of the mining industry, which lost its second place in the ranking to the benefit of the 'manufacture of metal products' division (Table 1).

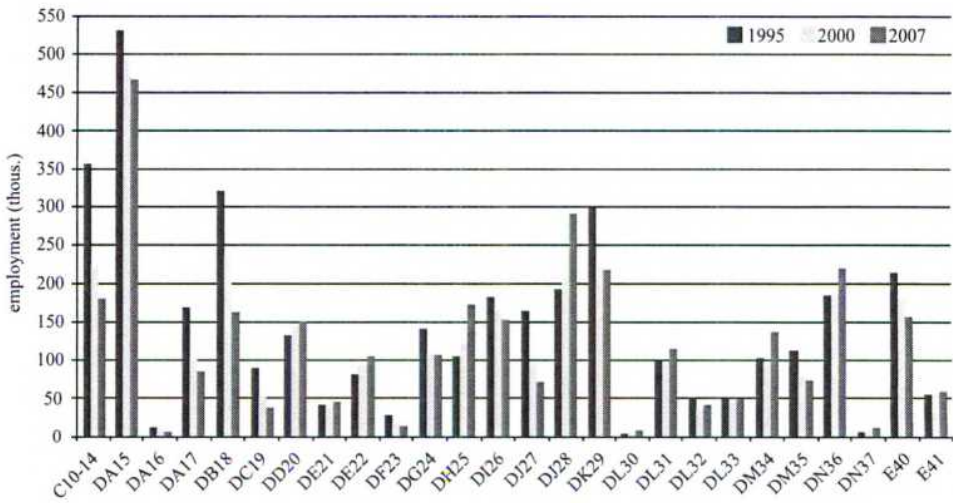


Fig. 4. Employment in industry in Poland by divisions in the years 1995, 2000, 2007

Explanation: C10–14 – Mining and quarrying; DA15 – Manufacture of food production and beverages; DA16 – Manufacture of tobacco products; DA17 – Manufacture of textiles; DB18 – Manufacture of wearing apparel and furriery; DC19 – Processing of leather and manufacture of leather products; DD20 – Manufacture of wood and wood products; DE21 – Manufacture of pulp and paper; DE22 – Publishing, printing and reproduction of recorded media; DF23 – Manufacture of coke, refined petroleum products; DG24 – Manufacture of chemicals and chemical products; DH25 – Manufacture of rubber and plastic products; DI26 – Manufacture of other non-metallic mineral products; DJ27 – Manufacture of basic metals; DJ28 – Manufacture of metal products; DK29 – Manufacture of machinery and equipment; DL30 – Manufacture of office machinery and computers; DL31 – Manufacture of electrical machinery and apparatus; DL32 – Manufacture of radio, TV and communication equipment; DL33 – Manufacture of medical, precision and optical instruments, watches and clocks; DM34 – Manufacture of motor vehicles, trailers and semi-trailers; DM35 – Manufacture of other transport equipment; DN36 – Manufacture of furniture; DN37 – Recycling; E40 – Electricity, gas, steam and hot water supply; E41 – Collection, purification and distribution of water; CDE – Industry (total)

Source: Own study based on GUS data

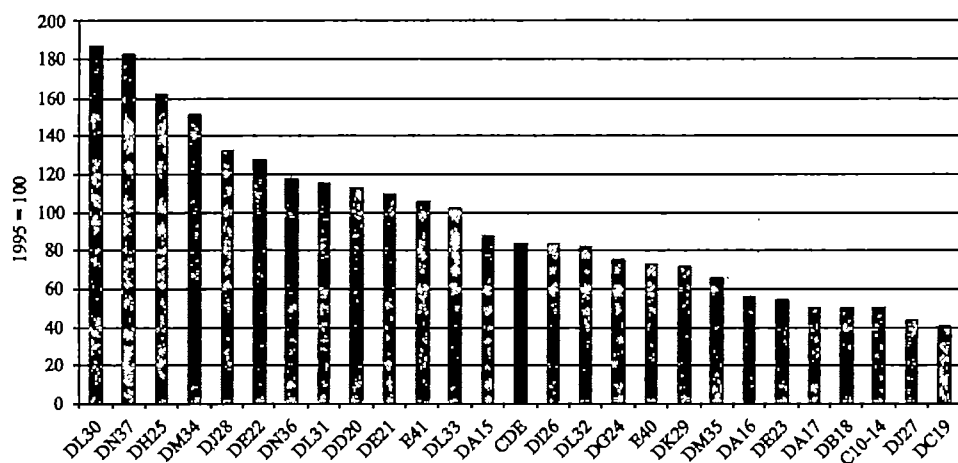


Fig. 5. Dynamics of employment in industry in Poland by divisions in the years 1995–2007

Explanation: C10–14 – Mining and quarrying; DA15 – Manufacture of food production and beverages; DA16 – Manufacture of tobacco products; DA17 – Manufacture of textiles; DB18 – Manufacture of wearing apparel and furriery; DC19 – Processing of leather and manufacture of leather products; DD20 – Manufacture of wood and wood products; DE21 – Manufacture of pulp and paper; DE22 – Publishing, printing and reproduction of recorded media; DE23 – Manufacture of coke, refined petroleum products; DG24 – Manufacture of chemicals and chemical products; DH25 – Manufacture of rubber and plastic products; DI26 – Manufacture of other non-metallic mineral products; DJ27 – Manufacture of basic metals; DJ28 – Manufacture of metal products; DK29 – Manufacture of machinery and equipment; DL30 – Manufacture of office machinery and computers; DL31 – Manufacture of electrical machinery and apparatus; DL32 – Manufacture of radio, TV and communication equipment; DL33 – Manufacture of medical, precision and optical instruments, watches and clocks; DM34 – Manufacture of motor vehicles, trailers and semi-trailers; DM35 – Manufacture of other transport equipment; DN36 – Manufacture of furniture; DN37 – Recycling; E40 – Electricity, gas, steam and hot water supply; E41 – Collection, purification and distribution of water; CDE – Industry (total)

Source: Own study based on GUS data

Table 1. Industry employment structure in Poland in the years 1995, 2000, 2007

Divisions	structure (%)			changes (1995– 2007)
	1995	2000	2007	
C10–14 Mining and quarrying	9.6	7.1	5.7	–3.8
DA15 Manufacture of food production and beverages	14.2	15.7	14.8	0.6
DA16 Manufacture of tobacco products	0.3	0.3	0.2	–0.1
DA17 Manufacture of textiles	4.5	3.2	2.7	–1.8
DB18 Manufacture of wearing apparel and furriery	8.6	7.6	5.2	–3.4
DC19 Processing of leather and manufacture of leather products	2.4	1.7	1.2	–1.2
DD20 Manufacture of wood and wood products	3.6	4.7	4.8	1.2
DE21 Manufacture of pulp and paper	1.1	1.3	1.5	0.3
DE22 Publishing, printing and reproduction of recorded media	2.2	3.1	3.3	1.1
DF23 Manufacture of coke, refined petroleum products	0.7	0.6	0.5	–0.3
DG24 Manufacture of chemicals and chemical products	3.8	3.5	3.4	–0.4
DH25 Manufacture of rubber and plastic products	2.8	3.9	5.5	2.6
DI26 Manufacture of other non-metallic mineral products	4.9	5.3	4.8	0.0
DJ27 Manufacture of basic metals	4.4	3.1	2.3	–2.1
DJ28 Manufacture of metal products	5.2	6.6	9.3	4.1
DK29 Manufacture of machinery and equipment	8.0	7.1	6.9	–1.1
DL30 Manufacture of office machinery and computers	0.1	0.2	0.3	0.2
DL31 Manufacture of electrical machinery and apparatus	2.7	3.0	3.7	1.0
DL32 Manufacture of radio, TV and communication equipment	1.4	1.1	1.3	0.0
DL33 Manufacture of medical, precision and optical instruments, watches and clocks	1.3	1.5	1.6	0.3
DM34 Manufacture of motor vehicles, trailers and semi-trailers	2.8	3.1	4.3	1.6
DM35 Manufacture of other transport equipment	3.0	2.5	2.4	–0.7
DN36 Manufacture of furniture	5.0	6.0	7.0	2.0
DN37 Recycling	0.2	0.3	0.4	0.2
E40 Electricity, gas, steam and hot water supply	5.7	5.7	5.0	–0.8
E41 Collection, purification and distribution of water	1.5	1.9	1.9	0.4
Industry (total)	100.0	100.0	100.0	x
Rodgers index	0.457	0.448	0.446	–0.011

Source: Own study based on GUS data

To determine the level of the division diversification of industry in a synthetic manner, the Rodgers index was calculated and then it was modified and adjusted by Warakomska (Troc, 1991). Small changes in the index of the division diversification of industry in Poland indicate maintenance of the average diversification of industrial activity; a small decline in the index's value may be evidence of simulation of the employment structure to that of highly developed countries.

An analysis of the changes in the share of the individual divisions in the industry employment structure shows that the most traditional, labour-consuming industries such as the mining industry, production of clothes, textile industry, production of leather but also production of machines and devices, power engineering and the chemical industry are losing their importance (Table 1). The divisions such as production of metal products, rubber and plastic products, production of furniture and vehicles have significantly increased their share in the structure. However, it is difficult to rank these divisions among the most technologically advanced ones. As it seems, we may speak here of the appearance of large foreign capital investments in these production divisions, which is also indicated by analyses conducted by other authors (Domański, 2001; Tobolska, 2007). However, it should be noted, quoting A. Świdurska (2009), that there is a positive upward trend in the value of sold production of high-technology industry in Poland with small changes in the employment size. However, it is worth stressing that during the examined period the development of these industries was not proceeding continuously. In addition, bearing in mind a necessity to compensate for a technological gap between Poland and highly developed countries, the rate of positive structural changes towards increasing the share of high-technology industries in Poland is still too low.

Thus, the issue of how the division structure of employment in industry in Poland looks against the background of other European countries seems interesting in this context. In individual EU countries (for which data were available) this structure is highly diversified. In most countries, we may notice the high share of 'food and tobacco manufacturing' (in the analysis, these divisions have been combined due to the lack of data resulting from statistical confidentiality) and of 'production of machinery and equipment' as well as 'production of metal products'. The share of the most technologically advanced industry divisions is relatively small but we have to bear in mind that they are industries of low labour consumption, though characterized by great value added. The calculated Rodgers index of the division diversification shows that Polish industry is far more diversified than that of other European countries (Fig. 6). The industry of Lithuania, Denmark, Latvia or Germany is less diversified, yet, it should be stressed that these indices differ slightly from each other, when adopting the value between 0.42 and 0.59.

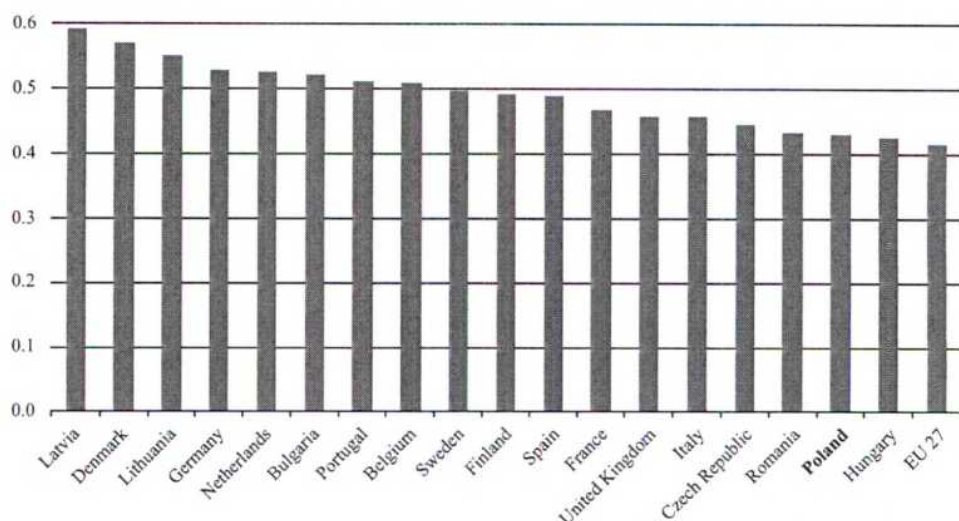


Fig. 6. Adjusted Rodgers index of the division diversification of industry for selected EU countries in 2006

Source: Own study based on Eurostat data

Attempts conducted to analyze the similarity between industry employment structures in individual EU countries using cluster analysis methods (e.g., Ward's method – Fig. 7) allow us to distinguish four groups of countries with similar division structures in 2006.

A characteristic thing is that Poland together with the Czech Republic and Hungary was included in the second group with Spain and Italy and not – as it might have seemed – with other Central and Eastern European countries. An analysis of characteristics of the division structure of employment for individual groups of countries shows that group 1, in which Belgium, France, the United Kingdom, Denmark, and the Netherlands have been included, is characterized by the high share of employment in the production of foodstuffs and tobacco products, metal products, machines and devices, publishing activity, printing industry, and chemical products. The countries from group 2, which covers the Czech Republic, Hungary, Spain, Italy, and Poland, are characterized by the high share of employment in the production of foodstuffs, metal products, machines, and devices and vehicles, while significant differences are visible here as regards the share of the high-technology divisions, as in the Czech Republic and in Hungary it is definitely higher than in Poland. Group 3, covering Germany, Finland and Sweden, is characterized by the relatively low share of employment in the production of foodstuffs, while this share is high in the production of machines, devices and metal products, with significant differences in employment in the automotive industry being noticeable

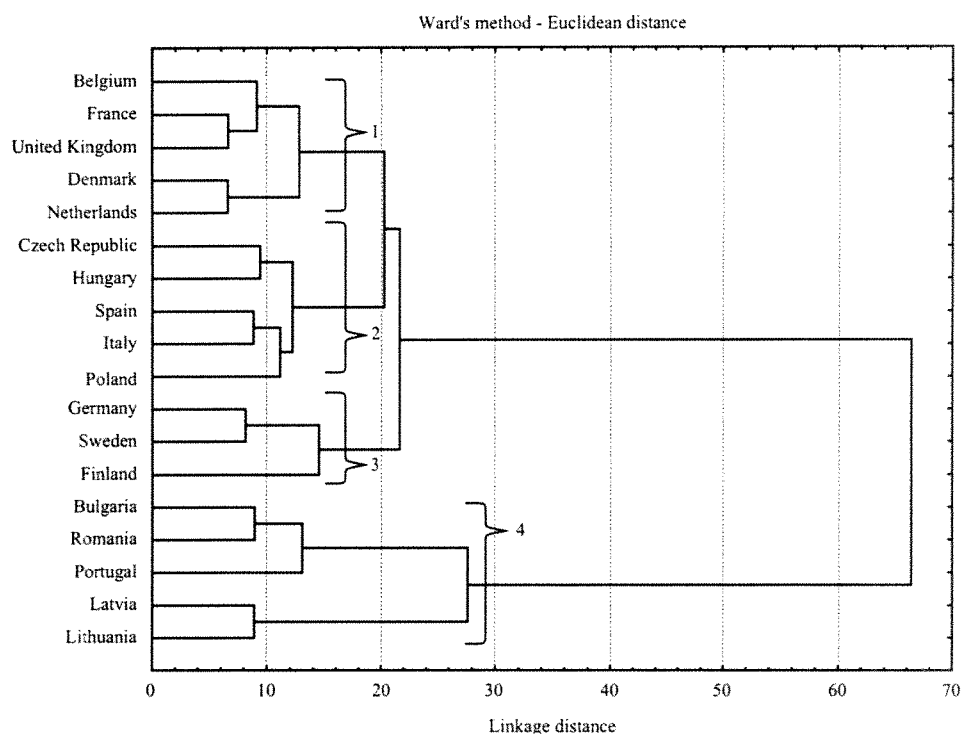


Fig. 7. Similarity between the industry employment structures of selected EU countries in 2006 in the light of cluster analysis

Source: Own study based on Eurostat data

here: in Finland, as opposed to Germany and Sweden, the share of this industry is low, while in Finland there is the highest share in the electronic industry (division DL32). Apart from the high importance of employment to the production of foodstuffs, group 4, covering Bulgaria, Romania, Portugal, Latvia, and Lithuania, is characterized by the relatively high share of the textile industry, production of clothes, wood and wooden products as well as low shares in employment in the high-technology divisions (DL30, 31, 32, 33). An analysis of similarities in terms of the employment structures indicates advantageous changes with regard to restructuring the Polish industry, whose structure is closer and closer to the structure of the so-called 'old' European Union countries.

From the standpoint of an analysis of Polish industry's competitiveness in global markets (including the single European market) under conditions of shaping the information society and creating the knowledge-based economy, a question about the share of the most technologically advanced divisions in the employment structure seems to be important. These industries generate a series

of multiplier effects in social and economic development and are characterized by much more beneficial economic effects of the activity when compared to the traditional industry. However, the analysis shows the low employment potential of these industries in Poland against the background of other countries. This share is far below the European average and is much lower than in the case of, for example, Hungary or the Czech Republic, which is also shown by other authors (Borowiec, Dorocki, Jenner, 2009). As it seems, it is rooted in the low research and development potential of the Polish economy. Against the background of other European Union countries, the R&D employment potential in Poland and its share in total employment is not significant; also, outlays on the expansion of R&D are low, when compared to other countries (Borowiec, Dorocki, Jenner, 2009; Rachwał, Wiedermann, Kilar, 2009). High differences within Central and Eastern European countries are noticeable here. In the Czech Republic and in Hungary, we may observe the dynamic growth of employment in R&D in the years 1995–2006, which may not remain without any influence on the relatively high shares of high-technology industries in the employment structure of these countries. When comparing outlays on the R&D activity in Poland and other Central and Eastern European countries to other EU countries, we may notice an even higher contrast than in the case of differences in employment in R&D works. It testifies to a higher amount of funds allocated for research by companies and institutions located in the area of the most developed part of the EU. Unfortunately, despite the small nominal increase in outlays on R&D works in Poland, the share of outlays on these works in GDP is decreasing, while in other countries of the region (especially in the Czech Republic and in Hungary) the dynamic increase in outlays was observed in the years 1995–2006.

CONCLUSIONS

The presented analysis of the changes in the Polish industry employment structure against the background of other EU countries allows the following conclusions to be formulated:

- during the examined period, there is a clear tendency of reducing employment in industry in Poland and the majority of the analyzed EU countries, which means decreasing importance of industry to the activation of labour resources, while reduction in employment in this sector does not have to mean progressing deindustrialization processes;
- in the case of the majority of the analyzed countries, the industry's share in the employment structure shows a downward trend (also in Poland) although in certain countries a small rise in this share is observed;

- in the employment structure, importance to the activation of labour resources is being lost mainly by the traditional industry divisions such as the mining industry, textile industry, and production of metals or clothes, which is related to the relocation of this type of activity to countries with lower labour costs;
- calculated indices of the division diversification of industry in Poland show maintenance of the average diversification in industrial activity; a small decrease in the index value may be evidence of simulation of the employment structure to that of highly developed countries, which are usually characterized by the high division diversification of industry, although it should be stressed that in the majority of the EU countries this diversification is lower than in Poland;
- the changes in the employment structure refer to the structure of investments in fixed assets in industry, including the foreign capital inflow structure;
- against the background of other countries, Poland is characterized by relatively low employment in the high-technology industry divisions, which may be related to disadvantageous trends of the changes in Poland with regard to employment and outlays on R&D works when compared to other EU countries, including also Central and Eastern European countries, transforming their economies, that develop their R&D potential and allocate more and more funds to these works, which is particularly visible in the Czech Republic;
- the share of outlays on R&D works in Polish GDP, which is clearly low when compared to other EU countries and regions, as well as relatively low outlays on the development of education and science, may essentially contribute slowing down positive changes in the division structure of employment in industry;
- the conducted analysis shows a need to use, in analyses of the role of industry and its individual divisions in the economy, not only the commonly available employment size but also other indicators reflecting the industrial potential (e.g., gross value added or value of sold production). The employment indicator should be, first of all, used in analyses of industry's role in the activation of labour resources.

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INNOVATION AND REGIONAL SOCIO-ECONOMIC DEVELOPMENT – EVIDENCE FROM THE FINNISH LOCAL ADMINISTRATIVE UNITS (1)

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ABSTRACT. It is often argued that innovation plays a key role in the economic growth of regions. Therefore, the impacts of innovation on the socio-economic development of regions have been widely discussed in previous studies, but with divergent areal coverage, methods, and datasets. As a point for departure, these relationships redrawn from international literature are tested here with a single dataset from Finnish local administrative units and with coherent methods. As there does not seem to be a generally accepted indicator for innovation which can claim to be superior, despite the growing literature on the subject, research and development (R&D), and patent statistics are used in this paper to represent innovation activity. The significant, strong, and positive relationship between innovation and traditional socio-economic variables is verified using Finnish regions.

KEY WORDS: Finland, regional socio-economic development, innovation, research and development, patents.

INTRODUCTION

It is often argued that innovations are highly influential for productivity and economic growth (Crosby, 2000; Piekkola, 2006), so the innovativeness of regions is an important, if not the key, factor for economic and regional development (Acs, Varga, 2002; Tang, 2006). Numerous studies (see below) elaborate connections between innovation and regional socio-economic development through the examination of individual variables. The results are encouraging as several of the individual variables (e.g., GDP, income, etc.) that could be used to describe the state of a region's development seem to be collinear with the indicators of innovation. These presumptions drawn from international literature on innovation and socio-economic development are tested in the case of Finnish local administrative units. In short, the aim of this paper is to describe

the linkages between innovation and regional socio-economic development in a more comprehensive and systematic way, by using a single dataset and coherent methods, than in previous studies.

Although the research on innovation has boomed in the last few decades, there is still no clear consensus as to the indicators by which innovation should be measured. As the need to use more than one dimension of innovation has long been recognized (e.g., Damanpour, 1991), the most common indicators of innovation, patents and R&D expenditure, are used in this study. Both of these measures are widely used and provide, at the very minimum, a good proxy for innovation, containing useful information on the innovative activities of regions, offering good data availability and reliability (Sterlacchini, 2008; Hasan, Tucci, 2010).

REGIONAL DEVELOPMENT

Regional development is a concept associated with positive attributes and it can be seen as a resource which does not automatically guarantee the well-being of residents, but offers a means to it. According to the classical theory of Myrdal (1969), regional development can be seen as a non-uniform process of cumulative causation, which is carried forward by fundamental innovations and which has the tendency to start in a small group of cores. These cores develop as centres of commerce, employment, and finance. The regions outside these cores fall behind and are in many ways dependent on the cores. Furthermore, regional development is a scale issue. In a global context, Finland is a developed country, but, on the other hand, there are regional differences within Finland. Consequently, regional development is regarded as uneven at its very base (Siirilä et al., 1990). However, the classical theory of regional development alone, described in short above, is an unsatisfactory explanation for economic growth. Thus, new concepts of regional development emphasize the importance of investments in human and technical capital and policies directed towards knowledge generation, innovation, and learning (Szajnowska-Wysocka, 2009).

Traditionally, variables such as industrialization, productivity, and GDP have been used to describe the development stage of a region. Nowadays, more technologically and scientifically oriented factors have replaced conventional variables as key elements of development. Earlier studies (Ebersberger, 2005; Florida et al., 2008) have shown that education, knowledge, R&D, and innovations are becoming more important factors affecting economic growth and regional development. Furthermore, the historically dominant focus on the economic factors of development has broadened to include social, ecological, political, and

cultural elements. The concept of development is largely a covenanted issue and it must be agreed what represents the concept of development (and to what extent). What constitutes development is geographically differentiated and changes over time (Pike et al., 2007). Thus, variables selected to describe the state of regional socio-economic development in this study are the most influential and also most commonly used in previous studies (see below) concerning regional development in Finland. These factors include traditional socio-economic variables such as GDP, unemployment, the percentage of the adult population that has completed higher education, etc. The availability or scarcity of these 'resources' defines the stage of development of a region.

In theory at least, Finnish regional and development policy has traditionally been in favour of balancing regional disparities whereby quality of life and employment opportunities, etc., are similar in every part of the country (e.g., Jauhiainen, 2008). However, previous studies on the regional economic development and well-being in Finland have shown that, Southern Finland, especially the Helsinki Metropolitan Region, is more developed when compared with the rest of the country (Rantala, 2001; Mikkonen, 2002; Siirilä et al., 2002). In addition, most university cities, including Tampere, Turku, Oulu, and Jyväskylä (see Fig. 1), act as strong growth centres. Finland is also following a polycentric growth model with regional (and university) cores (Antikainen, Vartiainen, 2005) highlighting the prominent role of innovation activity and knowledge-based development in Finland. The importance of universities in pursuit of economic growth has also been recognized in previous international studies as knowledge flows, university start-up enterprises (spin offs), and the availability of educated workers who constitute a comparative advantage for university regions (c.f. Goldstein, Renault, 2004; Bramwell, Wolfe, 2008). Furthermore, although now suffering from difficulties, the Finnish information and communication technology sector (ICT-sector) has been one of the leading regional growth engines. This has led to a situation where strong R&D oriented regions, such as Salo (largely due to Nokia's strong presence in the region), have also emerged as regions with high growth potential. In view of the above, it seems plausible to suggest that innovation and socio-economic development are connected in Finland at the regional level.

REGIONAL INNOVATION RESEARCH

In this study the main focus is on technical product innovation putting aside process, service, marketing, and organizational innovations as they are more difficult to measure with proxy indicators (e.g., Hipp, Grupp, 2005). From the

various innovation typologies (see Fagerberg, 2005), innovation is distinguished from invention and defined here as ‘conversion of knowledge into new products, services or processes (or the introduction of significant changes into existing ones) to be introduced on the market’ (Molina-Morales, Mas-Verdu, 2008). There is a spectrum of variables used to describe innovation, including innovation counts, science publications, trademarks, etc., patents and R&D expenditure were used in this study.

R&D activity is one commonly used variable in regional innovation research. The limitation of the usage of R&D expenditure as a variable to describe innovation is that it is an input factor, which is really a measure of innovative input or effort, and not necessarily related to successful output (Gu, Tang, 2004; Coad, Rao, 2008). R&D statistics imperfectly capture the development of technology in small firms and certain industries, because R&D is only one out of several inputs, such as design, trial production, market analysis, training, etc. (Ratanawaraha, Polenske, 2007). Nonetheless, Thornhill (2006) and Tödtling et al. (2006) have shown that R&D positively correlates with innovation, and Hanel (2008) has noted that firms that conduct R&D are significantly more likely to innovate than those that do not. Furthermore, Sternberg and Arndt (2001) state that, the propensity to innovate is high for firms in regions with a high ratio of R&D expenditure to GDP.

Patents are also frequently used as an indicator of innovation. However, there are shortcomings in the usage of patents as an indicator of innovation. They measure the result of invention rather than innovation, not all firms make the effort to claim patents, certain sectors are poorly suitable for patent application, the range of patentable innovations constitutes only a sub-set of all research outcomes, not every registered patent is actually applied for and used, and the quality of individual patents varies widely – some inventions are extremely valuable, whereas others are of almost no commercial value (Gu, Tang, 2004; Ratanawaraha, Polenske, 2007; Coad, Rao, 2008). Although there is a systematic correlation between a firm’s innovation output and its actual patenting behaviour, there are distinct differences in a firm’s propensity to patent according to its size, sector, and cooperating partners (Brouwer, Kleinknecht, 1999; Kleinknecht et al., 2002). For example, Arundel and Kabla (1998) have calculated patent propensity rates (the percentage of patentable innovations that are actually patented) and shown that only a few sectors have patent propensity rates that exceed 50%. This is because firms can use secrecy or lead-time to protect their investment in innovation. In fact, Arundel (2001) has shown that R&D-performing firms do find secrecy a more effective means of appropriation than patents. Nonetheless, studies have shown that patents are an indicator of innovation (Sternberg, Arndt, 2001; Acs et al., 2002; Hagedoorn, Cloudt, 2003).

A further difficulty in the usage of the above-mentioned variables in measuring the innovativeness of regions is that, in the case of multiplant firms, R&D activities may be attributed to headquarters and not to the place where the R&D activities are actually conducted. The same holds true for patents, since patents are often the result of innovative activities conducted in regions which do not always coincide with those where the actual applying institution is resident (Evangelista et al., 2001; Kleinknecht et al., 2002). These facts may, thus, lead to an underestimation of the real innovativeness of some regions and overestimation of others.

The variables used to measure innovation are interconnected. Although some exceptions have been reported (e.g., Kleinknecht et al., 2002), several studies have shown that the variables described above correlate with each other and there is a strong and positive relationship between local R&D efforts and patents (Ahuja, Katila, 2001; Co, 2002; Bilbao-Osorio, Rodríguez-Pose, 2004; Cabrer-Borrás, Serrano-Domingo, 2007). These interconnections could mean that both of the indicators discussed here in greater detail could be viable measures of innovation. In fact, Hagedoorn and Cloudt (2003) as well as Gössling and Rutten (2007) have stated that statistically it does not make much difference which indicators of innovation are used. Thus, one could state that there does not seem to be a generally accepted indicator for innovation which could be claimed to be superior, and that the indicators that represent innovation have to be selected according to the objectives of each analysis. Additionally, data availability plays a role in the selection of indicators (see Kleinknecht et al., 2002).

THE RELATIONSHIP BETWEEN VARIABLES DESCRIBING INNOVATION AND VARIABLES DESCRIBING SOCIO-ECONOMIC DEVELOPMENT

As mentioned above, innovation is one variable considered highly influential to productivity and economic and regional growth, and it is an important, if not the key factor, for regional socio-economic development; it is ultimately a driver in the improvement in living standards. In fact, Mitchell (1999) argues that the single most important factor in creating growth in many economies is the advances made in technology, and Porter (2003) stresses that regional economic performance is strongly affected by the vitality and plurality of innovations. The key effect of innovations is that they increase productivity and productivity growth accounts, to a great extent for the growth in GDP (Rodríguez-Pose, 1999). Thus, innovations create wealth. However, wealth is also a precondition for innovation because wealth gives access to input factors for innovation (Gössling, Rutten, 2007). For example, it has been shown, that in general, national R&D intensity tends to increase along with per capita income (Mitchell, 1999).

The other variables describing regional development selected for the purpose of this study have several theoretical and empirical linkages to innovation so there should consequently be real correlations between them. The relationship between innovation and productivity, GDP, and GDP growth has already been stated. Furthermore, the presence of an (young) educated (the terms ‘talented’, ‘creative’, and ‘skilled’ are also commonly used) workforce and lower unemployment strongly influences the innovations made in a region (Rodríguez-Pose, 1999; Ceh, 2001; Sternberg, Arndt, 2001; Bilbao-Osorio, Rodríguez-Pose, 2004; Florida, 2005; Ewers, 2007; Gössling, Rutten, 2007; Czarnitzki, Hottenrott, 2009), and innovations have a positive and significant effect on employment (Van Reenen, 1997). At the same time the innovativeness of a particular region attracts educated human capital to that region (Faggian, McCann, 2009). Barkley et al. (2006) have shown that innovative activity is positively associated with population growth, employment, earnings, and, to some degree, with new housing. Urbanization has a positive influence on innovativeness and, furthermore, urbanization attracts better educated employees to a region (Florida, 2005; Bettencourt et al., 2007). Highly qualified professional employees are attracted to economic opportunities and quality of life factors (Simmie et al., 2002; De Noronha Vaz et al., 2006), which are, in general, better in cities. Thus, larger cities are more inventive per inhabitant than smaller ones (Bettencourt et al., 2007). Firms in urban agglomerations dedicate a greater share of their R&D to product development and have a higher likelihood of announcing new products compared to firms in rural regions (Brouwer et al., 1999). There is also a tendency for firms, and especially their R&D labs, to be located in the larger cities, which increases the innovativeness of metropolitan areas (Bettencourt et al., 2007). Housing and housing costs can also play an important role in innovation, they encourage workers to migrate to and stay in a region (Sternberg, Arndt, 2001; Ewers, 2007).

These above-mentioned theoretical and empirical linkages between variables describing innovation and variables describing regional socio-economic development are tested in this paper in a comprehensive way by using a single dataset and convergent methods, which sets this paper apart from previous studies that have used a whole spectrum of datasets and methods. Thus, the conclusions from previous literature can be tested and verified or disproved in a systematic way.

DATA AND METHODS

The data used here covers all of the (68) local administrative units (LAU-1) of mainland Finland and Åland as a whole (Fig. 1). LAU-1s (*seutukunta* in Finnish) are groups of municipalities that together form larger functional areas of daily

migration. The selection of LAU-1s as the observation units is a compromise between individual municipalities and the significantly larger NUTS-3 regions motivated by the general trend that Finnish municipalities have relatively low population counts, consequently suffering from low data availability. Furthermore, many municipalities act as suburban areas closely linked to the central town in the region, i.e., LAU-1. Indeed the selection of NUTS-3 regions would have significantly decreased the number of observations.

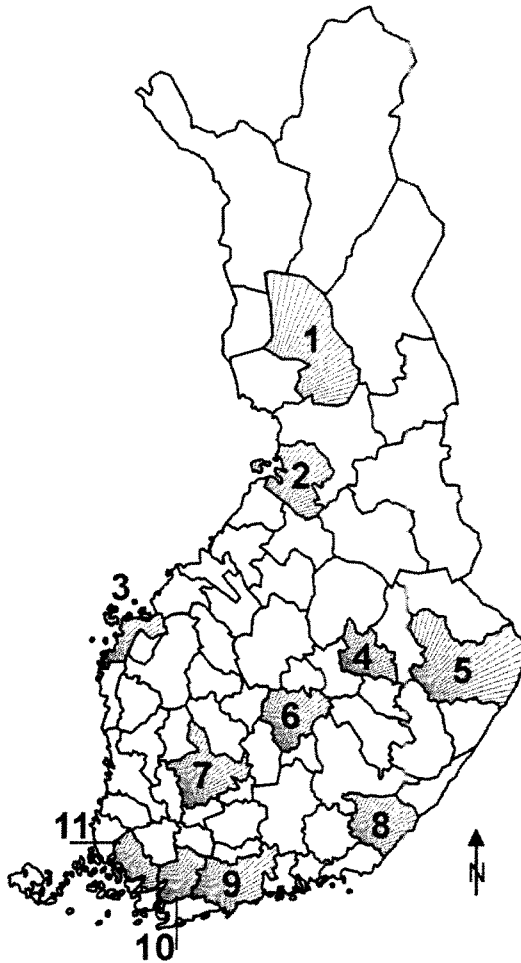


Fig. 1. Finnish LAU-1 regions in 2010 (university regions and Salo are highlighted)
 Explanation: 1 – Rovaniemi; 2 – Oulu; 3 – Vaasa; 4 – Kuopio; 5 – Joensuu;
 6 – Jyväskylä; 7 – Tampere; 8 – Lappeenranta; 9 – Helsinki; 10 – Salo; 11 – Turku

Source: Own elaboration based on a cartogram provided by Arttu Paarlahti, University of Helsinki

Table 1. Chosen variables for depicting innovation and regional socio-economic development

R&D expenditure	R&D expenditure/inhabitant
Patents	Patents granted/1,000 inhabitants
Population	Number of inhabitants
Population change	Net population change % (natural population change and migration)
Working population	Percentage of people of working age (between 15 and 64 years of age)
Unemployment	Unemployment rate %
Dependency ratio	Nonworking population compared with working population
Gender structure	Number of women compared with 1,000 men
Education	Percentage of population with higher education (20 years and older)
Urbanization	Percentage of densely populated areas
GDP	Gross domestic product/inhabitant
GVA	Gross value added/inhabitant
Income	Gross income/inhabitant
Housing	Percentage of small and/or inadequate housing
Housing costs	Average cost of housing €/m ²

Source: Own compilation

The data was compiled or calculated from the official Statistics Finland databases (Altika and StatFin) and the Official Statistics of Finland (Table 1). Housing costs were compiled from the data of housing trade in the municipalities belonging to the LAU-1s. The variables describing innovation, GDP, and gross value added (GVA) have been compiled from earlier data with older LAU-1 divisions, which means that a few smaller contemporary municipalities are misplaced compared to the LAU-1 divisions used in this study. The data concerning regional socio-economic development was gathered from the year 2006 and the data concerning innovation from 2003–2005, because it is arguable whether innovation has an immediate impact on regional socio-economic development: instead a requisite time lag is needed. The missing data in some of the variables is calculated by using proportional averages, based on the population of the neighbouring LAU-1s and the number of inhabitants in the LAU-1 in question.

In this study, correlation analysis is used to explore connections between the variables that describe innovation and the variables describing regional socio-economic development. As is often the case when analyzing regional statistics, most of the variables examined here do not follow a normal distribution (tested with Shapiro-Wilk test of normality). Thus, the dataset is analyzed with Spearman's correlations because, as a non-parametric method, it is not based on the presumption that variables follow a normal distribution. A description of different correlation indexes can be found, e.g., in Chen and Popovich (2002). When using correlation analysis it is important to bear in mind that, as such, correlation does not reveal anything about the causality between variables.

Correlation simply states whether there is a connection between the variables and the intensity and direction of this connection, but, fortunately, it also provides information regarding what the plausible causal relationships might be.

RESULTS AND DISCUSSION

Almost all of the correlations between the innovation indicators and the variables describing regional socio-economic development are statistically highly significant (Table 2). Only unemployment seems to be uncorrelated with R&D

Table 2. Spearman's correlation matrix for indicators of innovation

2006		Patents 2003	Patents 2004	Patents 2005	R&D 2003	R&D 2004	R&D 2005
Population	Cor.	0.352**	0.370**	0.200	0.653**	0.653**	0.673**
	Sig.	0.003	0.002	0.099	< 0.001	< 0.001	< 0.001
Population change	Cor.	0.468**	0.505**	0.326**	0.621**	0.609**	0.580**
	Sig.	< 0.001	< 0.001	0.006	< 0.001	< 0.001	< 0.001
Working population	Cor.	0.429**	0.425**	0.160	0.662**	0.643**	0.631**
	Sig.	< 0.001	< 0.001	0.189	< 0.001	< 0.001	< 0.001
Unemployment	Cor.	-0.233	-0.316**	0.298*	-0.077	-0.065	-0.048
	Sig.	0.054	0.008	0.013	0.528	0.598	0.694
Dependency ratio	Cor.	-0.561**	-0.591**	-0.482**	-0.568**	-0.550**	-0.524**
	Sig.	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Gender structure	Cor.	0.510**	0.399**	0.302*	0.584**	0.620**	0.646**
	Sig.	< 0.001	0.001	0.012	< 0.001	< 0.001	< 0.001
Education	Cor.	0.546**	0.445**	0.286*	0.738**	0.745**	0.733**
	Sig.	< 0.001	< 0.001	0.017	< 0.001	< 0.001	< 0.001
Urbanization	Cor.	0.592**	0.462**	0.339**	0.687**	0.695**	0.684**
	Sig.	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001
GDP	Cor.	0.502**	0.422**	0.336**	0.609**	0.630**	0.624**
	Sig.	< 0.001	< 0.001	0.005	< 0.001	< 0.001	< 0.001
GVA	Cor.	0.514**	0.437**	0.347**	0.605**	0.630**	0.621**
	Sig.	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001
Income	Cor.	0.617**	0.531**	0.389**	0.684**	0.682**	0.670**
	Sig.	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
Housing	Cor.	-0.426**	-0.359**	-1.179	-0.573**	-0.567**	-0.557**
	Sig.	< 0.001	0.002	0.141	< 0.001	< 0.001	< 0.001
Housing costs	Cor.	0.382**	0.339**	0.175	0.615**	0.628**	0.614**
	Sig.	0.001	0.004	0.149	< 0.001	< 0.001	< 0.001

Explanation: ** Correlation is significant at the 0.01 level. * Correlation is significant at the 0.05 level

Source: Own calculations based on the data collected from Statistics Finland – at www.stat.fi

expenditure. Patents per inhabitant from the year 2005 forms an exception to the discussion above. The correlation between them and the variables describing regional socio-economic development are relatively less significant. Although some of the weakening of the correlation coefficients can be explained through an overall drop in the number of patents in Finnish LAU-1s, it seems that patents need more time than R&D activity to have an impact on regional socio-economic development. The same trend, however, is also generally visible in the case of R&D expenditure.

The results support the theoretical framework of this study. The positive connection between innovation and economic and regional growth is clear in Finland. The indicators of innovation have a strong, positive, and significant correlation with GDP, GVA, and income. Thus, as Gössling and Rutten (2007) have shown, the connection between innovation and wealth could be bidirectional: innovation creates wealth and at the same time wealth is a precondition for innovation. Since population and innovation correlate highly and significantly with each other, a sufficient population base can contribute to the innovativeness of Finnish regions. The hypothesis of the heightened innovation tendency of cities compared to rural areas is supported by the fact that in Finland urbanization correlates highly and significantly with indicators of innovation. The results can be generalized at a level which states, as Bettencourt et al. (2007) have done, that larger cities (more urbanized) are more inventive per inhabitant than smaller ones. The positive association with innovation and population growth suggested by Barkley et al. (2006) is also supported by the Finnish data. When these results are viewed from another standpoint it could be stated equally well that innovations can generate city development and urbanization. In fact, innovations made in agriculture are conventionally seen as the starting point of the history of urbanization (Bairoch, 1988).

According to the Finnish data, education has a strong, positive, and significant correlation with indicators describing innovation. The same holds true for the working population. These findings verify earlier statements in literature (e.g., Ceh, 2001): the presence of an educated workforce is a very important factor affecting the rate of innovation. Two other clear indicators of regional socio-economic development, gender structure and dependency ratio, also correlate with indicators of innovation. An unbiased gender structure (when the ratio of women to men is balanced) has a positive correlation with indicators of innovation. The correlation between the dependency ratio and indicators of innovation is negative, which means that the smaller number of people outside the working population in comparison to the workforce, the higher the innovativeness of the region or vice versa. These findings strengthen the notion that innovation is connected with regional socio-economic development.

It also seems that in Finnish regions housing and housing costs do play a part in innovation as earlier studies (Sternberg, Arndt, 2001; Barkley et al., 2006; Ewers, 2007) have suggested. Indicators of innovation are negatively and significantly correlated with housing. Because the standard of housing is measured here as the percentage of small and/or inadequate housing, this means that good housing conditions and indicators of innovation are connected. This is further supported by the fact that higher housing costs and the indicators of innovation are in correlation with each other. Also, in this case the effects are probably reciprocal: the good housing conditions attract possible innovators to move into the area, and as innovations seem to create wealth they also heighten the demand and enable the construction of better and more expensive housing.

Earlier notions (e.g., Rodríguez-Pose, 1999; Barkley et al., 2006) about the connection between low unemployment and indicators of innovations and the positive effect innovations on employment growth are not supported by this analysis since there seems to be little connection between the indicators of innovation and the unemployment rate. One explanatory factor might be that technological innovation usually leads to a heightened efficiency, i.e., to a decrease in the need for manpower.

CONCLUSIONS AND LIMITATIONS

The results of this study support the earlier findings which demonstrate that the individual variables used to describe regional socio-economic development are connected with indicators of innovation. However, the analyses used in this paper were conducted using a single dataset and convergent methods. In contrast to previous research which utilizes divergent datasets and methods, this paper has provided more systematic and comprehensive evidence of the linkages between regional socio-economic development and innovation.

From the multitude of different correlations one conclusion is that innovation and regional socio-economic development are connected in Finland: almost all of the variables describing regional socio-economic development (apart from unemployment) used in many earlier studies on the regional development of Finland (e.g., gender structure, dependency ratio, and housing) are connected to the indicators of innovation education acting as a good example. The positive connection between innovation and regional economic development is, thus, clear (GDP, GVA, and income are positively and significantly correlated with indicators of innovation). The causal connection between regional socio-economic development and innovation is likely to be bidirectional. Innovations generate regional development and a certain stage of regional development is

necessary to create innovations (see Gössling, Rutten, 2007). More developed regions have better conditions for creating innovations than regions that have lagged behind and it indeed seems that larger cities are more inventive than rural areas (indicators of innovations are positively and significantly correlated with population, urbanization, and population change). It could also be concluded that innovation is, in fact, part of regional socio-economic development and indicators of innovation should be used to describe the development stage of regions alongside more traditional socio-economic indicators. This paper also confirms the need to consider time lags between R&D, patent statistics and regional socio-economic development. This confirms the more general trend which suggests that there are time lags between the introduction of innovative activities and their impacts upon traditional socio-economic data.

It should be noted that this study does not make any generalizations about the connection between innovation and regional development on a larger scale. The data is collected from Finland and, thus, the results represent the situation in Finland. In other countries, the connections could be different or there could be no significant correlations at all. This might be an interesting viewpoint for future studies as it is nonetheless likely that the situation may be quite similar in at least other developed countries. It also has to be kept in mind that in this study only proxy indicators, and not direct innovation counts, are used to present the innovation phenomenon. In addition, a cause for some caution is the fact that the missing data is calculated by taking advantage of the neighbouring LAU-1s, thus decreasing the actual variation in the data. However, the analysis was also conducted by using the original dataset with the missing data, and the results were very similar to the ones represented here.

NOTES

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IMMIGRANTS AND IMMIGRATION POLICY IN AGEING FINLAND

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ABSTRACT. The paper addresses the issue of current immigration to Finland in the context of population ageing. It is estimated that about 40% of the present labour force will have withdrawn from the Finnish labour market by the year 2020. The government of this rapidly ageing country is seeking possible remedies to the problem of a shrinking labour force. The necessity of attracting a new workforce as well as the growing number of immigrants in the ethnically homogeneous Finnish society create a need for more detailed and creative immigration policy. The paper analyzes the age and economic structure of the immigrant population, its participation in the labour market as well as the importance of immigration in contemporary demographic changes in Finland. Another aim of this paper is to outline major issues concerning Finnish immigration policy.

KEY WORDS: Finland, immigrants, immigration policy, ageing, labour shortages, integration.

INTRODUCTION

Finland is a European country where demographic changes towards the ageing of the population are at the most advanced stage. In 2009 the elderly (aged 65 and over) constituted 17% of the population. Furthermore, over 27% of the elderly were those aged 80 and over. According to population projections in the year 2020 almost one third of the Finnish population will be over 60 years old. This shift in the age structure will be reflected in a decline of the working-age population and an increase in the number of pensioners. It is estimated that about 40% of the present labour force will have withdrawn from the labour market by the year 2020. The threat of labour shortages is currently one of the most important issues that the Finnish government needs to address (Ilmarinen, 2006: 17). The economic consequences of a shrinking labour force create the need for specific actions and changes, especially in the area of immigration policy. Attracting foreign labour may be part of the solution to this looming problem.

With its peripheral location and unfavourable climate conditions, Finland has been traditionally a country of emigration. Until the end of the 1970s, the annual rate of emigration had exceeded the annual rate of immigration. The Swedish-speaking Finns constitute the largest group among the traditional ethnic minorities living in Finland (approximately 5.5%). Other major ethnic minorities are: the Sámi (indigenous people inhabiting mainly Lapland) and the Romani. In 2009 Finnish was the mother tongue of almost 91% of the population. Foreign citizens constituted only 2.9% of the population. Although Finnish society is still perceived as being ethnically homogeneous, the number of immigrants has been increasing constantly, as has been the demand for additional workers. The rethinking of certain elements of immigration policy such as work permits, citizenship, eligibility for social assistance, equal opportunity in the labour market, and the integration of newcomers has become a vital issue in recent years.

The purpose of the paper is to characterize and evaluate current trends in immigration to Finland in relation to the demographic situation in the country as well as to existing immigration policy. The data used herein were acquired from two online statistical databases: StatFin and Statistics Finland. Administrative regions in Finland were used as a basic spatial unit (20 regions in 2010). The majority of the data describe the situation in the year 2008 and 2009. Migration and population time series from 1945 to 2009 and projections up to the year 2060 were also used.

IMMIGRANTS IN FINLAND

In the period between World War II and the 1970s, Finnish society was 'closed' with an insignificant proportion of foreign-born inhabitants and negative net migration. Starting in the early 1980s, the number of immigrants in Finland has been surpassing the number of emigrants (Heikkilä, Peltonen, 2002: 2). Until the end of the 1980s, immigration to Finland consisted primarily of Finnish citizens returning from Sweden (85%) who had emigrated there 10 to 20 years earlier in order to pursue better job opportunities. A significant increase in the number of immigrants occurred in the early 1990s (Fig. 1). Several factors influenced this growth including the collapse of the Soviet Union, the return migration of ethnically Finnish Ingrians, the immigration of Estonians, and the influx of refugees from the former Yugoslavia (mainly Bosnia and Herzegovina), Africa (Somalia), and Asia (Iraq). Today, most new immigrants in Finland come from Sweden, Estonia, the Russian Federation, United Kingdom, and Germany. The net migration rate for Finland in 2009 was 2.72‰, with the immigration rate (5‰) being almost twice as high as the emigration rate.

IMMIGRANTS AND IMMIGRATION POLICY IN AGEING FINLAND

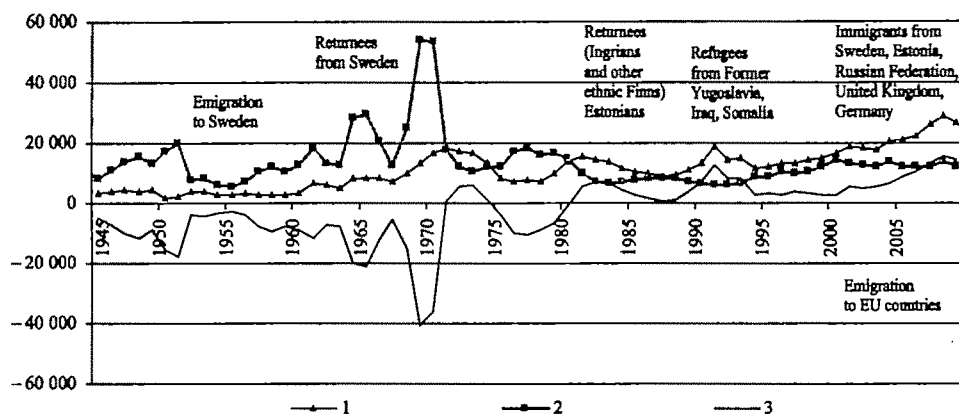


Fig. 1. Changes in immigration, emigration and net migration in Finland in 1945–2009
Explanation: 1 – net migration; 2 – net emigration; 3 – net immigration

Source: Own calculations based on StatFin

The integration policy formulated by the Finnish government in the 1980s assumed a dispersion of refugees and returnees to smaller towns and sparsely populated areas. However, immigrants have tended to settle in certain places, especially the capital region of Helsinki (Heikkilä, Peltonen, 2002: 4). In 2009 about 27% of the entire foreign population in Finland lived in Helsinki, whereas the Helsinki Metropolitan Area (includes Helsinki, Espoo, Vantaa, and Kauniainen) concentrated more than 44% of the foreign citizens living in Finland, and 88% of those living in Uusimaa Region. At the same time, half of the entire foreign population in Finland was centred in the Uusimaa Region, which constituted almost 5.5% of the population of this particular region. Furthermore, the rate of immigration to the Uusimaa Region (2.22‰ in 2009) is significantly different than that for other regions.

Other major clusters of foreigners are the municipalities of Turku and Tampere. The relatively high percentages of foreign citizens in Åland (the autonomous, Swedish-speaking region of Finland) and Ostrobothnia are the result of the concentration of the Swedish population. The lowest percentages of foreign citizens are noted in the already sparsely populated regions of Etelä-Savo, South Ostrobothnia, and Pohjois Savo. The regions of Uusimaa, Pirkanmaa, and Varsinais-Suomi received the largest number of immigrants in 2009 (Fig. 2). Most of the new immigrants chose to settle in major cities such as Helsinki, Tampere and Turku.

The age structure of the immigrant population is one of the most important issues connected with demographic changes towards the ageing of the population and the resulting consequences for the labour market. Currently about 66%

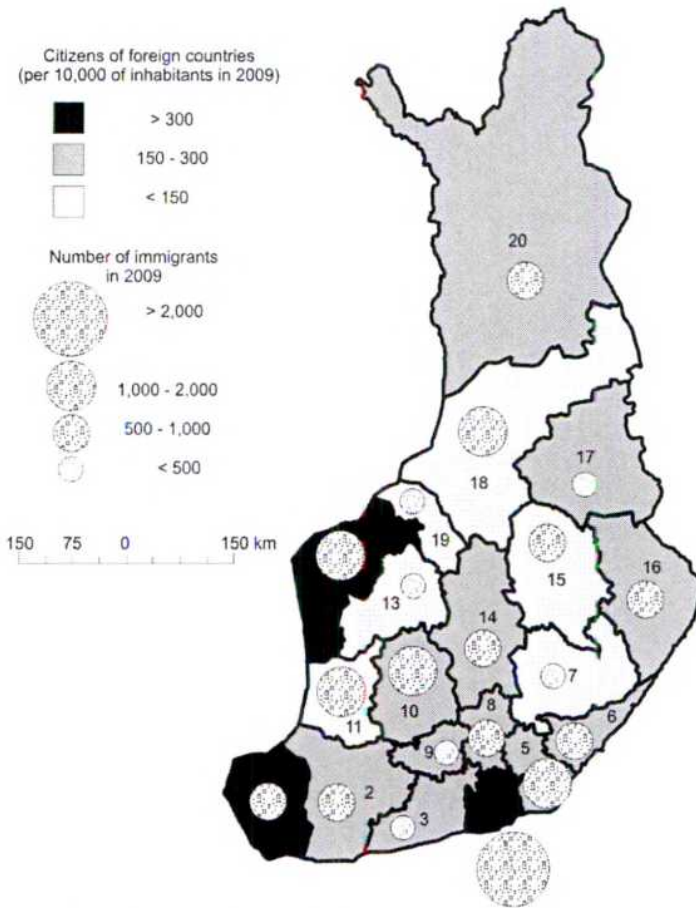


Fig. 2. Spatial distribution of foreign citizens and number of immigrants coming to Finland by regions in 2009

Explanation: 1 – Åland; 2 – Varsinais-Suomi; 3 – Itä-Uusimaa; 4 – Uusimaa; 5 – Kymenlaakso; 6 – South Karelia; 7 – Etelä-Savo; 8 – Päijät-Häme; 10 – Pirkanmaa; 11 – Satakunta; 12 – Ostrobothnia; 13 – South Ostrobothnia; 14 – Central Finland; 15 – Pohjois-Savo; 16 – North Karelia; 17 – Kainuu; 18 – North Ostrobothnia; 19 – Central Ostrobothnia; 20 – Lapland

Source: Own calculations based on StatFin

of the Finnish population is of working age (15–64). The proportion of the young (aged 0–14) is slightly smaller than that of the elderly (aged 65 and over). The population pyramid for Finland for 2009 possesses a shape typical of a population that is starting to decline – narrow at the bottom with large proportions of the oldest age groups (Fig. 3A). The greying of the population is even more readily visible on the diagram constructed for the year 2040 (Fig. 3B).

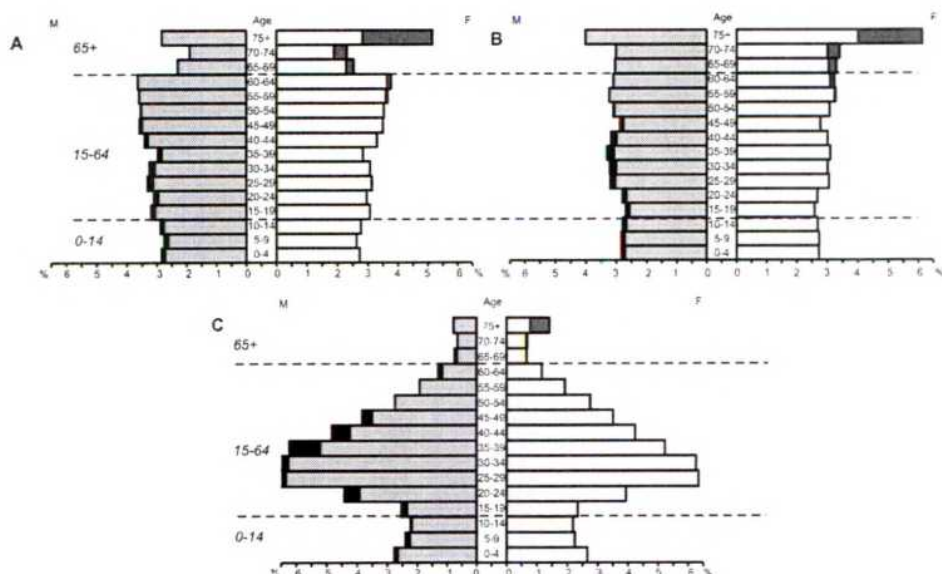


Fig. 3. Age and gender structure of population in Finland

Explanation: A – Finland 2009; B – Finland 2040; C – Foreign citizens 2009

Source: Own calculations based on StatFin

In this diagram, the oldest groups are more numerous than the youngest groups and the share of the working-age group is smaller by almost 9% compared to the year 2009. On the other hand, the majority (80.5%) of foreign citizens living in Finland and the majority of immigrants who arrived in the country in 2009 (79.5%) were of working age. Only 5% of the former and 2.5% of the latter consisted of the elderly (Fig. 3C).

The ratio of the elderly population to the working-age population – known as the old age dependency ratio – was 25.6 (per 100 population at working age) for Finland in 2009. It is estimated that during the next fifty years, the share of the elderly population will increase from a current level of 17% to almost 30%, while the share of the working-age population will decrease to 55.8% (Fig. 4). The increase in the old age dependency ratio to a level of 51.5 (per 100 population at working age) in the year 2060 means that there will be fewer than two persons of working age per one pensioner.

Considering the projected demographic changes, attracting immigrants appears to be a necessity. Although the current level of immigration does not have a significant effect on the age structure of the overall population in Finland, future increases in immigration might contribute to a rejuvenation of the population of Finland. It is assumed that future trends in the level of births and deaths will

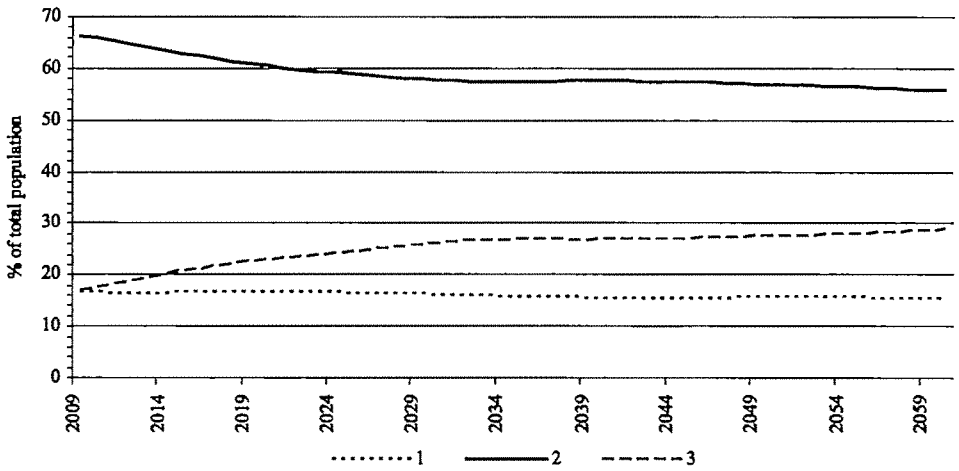


Fig. 4. Projected changes in proportions of different age groups in Finland in 2009–2060
Explanation: 1 – aged 0–14; 2 – aged 15–64; 3 – aged 65+

Source: Own calculations based on StatFin

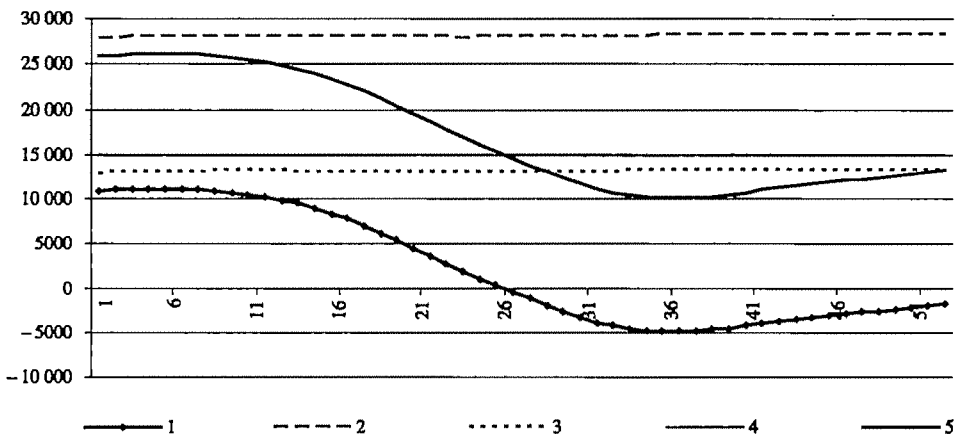


Fig. 5. Projected demographic changes in Finland in 2009–2060
Explanation: 1 – natural increase; 2 – net immigration; 3 – net emigration; 4 – net migration; 5 – population increase

Source: Own calculations based on StatFin

result in a negative natural increase starting in 2034 (Fig. 5). An increase in the influx of immigrants could positively affect the birth rate, as it is usually higher among immigrants, especially those from the less developed countries. Although the total fertility rate for foreign population in Finland is only slightly higher than that for the native population, significant differences are observed within the foreign population (e.g., in the year 2006 the birth rate for Somali population was 26‰, whereas for Russian and Estonian populations – around 9‰; the birth rate for the whole population of Finland was 11‰) (Saarto, 2007: 36). However, the fact that immigrant women tend to stay at home and take care of their families more often than they work outside the home (Heikkilä, Peltonen, 2002: 5) must be taken into account. Moreover, a relatively large working-age population will enter the pension system at some point in time. Therefore, it is important to increase the rate of influx of working-age immigrants. Assuming that the number of immigrants and emigrants will stay at the current stable level, with immigration exceeding emigration, Finland is going to experience a decline in population growth, especially between 2020 and 2040.

In the context of the population structure, it is also important to analyze the age and educational profile of emigrants from Finland. The main destinations for Finnish emigrants in 2009 were Sweden, the United Kingdom, Estonia, the United States, and Germany. The largest proportion of emigrants was of working age – almost 83%. In addition, more than one third of emigrants were people in the 25–34 age group. Finns emigrating to other European countries are usually young and well-educated. It is estimated that the majority of Finnish emigrants are going abroad to work for either international companies or Finnish companies doing business abroad (Koivukangas, 2003: 3). This type of emigration can be perceived as a form of brain drain. In this context, the educational profile of immigrants also deserves special attention. There are no sufficient statistics on the immigrants' level of education. Approximations concerning the education level of foreign population are based on the average education level in the country of origin. The average education level of immigrants, measured as the average number of years of education, is 8 years, which is less than the duration of compulsory education in Finland (Johansson, 2008: 12). Moreover, the survey investigating the education level of immigrants shows that it varies within the foreign population (Paananen, Pohjanpää, 2003). In the year 2002 one fourth of the Somali population aged 25–64 had no training. On the other hand around 60% of Russians and 80% of Estonians had at least secondary level qualifications. What is more, almost 40% of Russians attained higher education degree. The structure of foreign population education informs about the potential and chances of immigrants on the labour market, and the possible demand for different forms of education and training for foreigners.

IMMIGRANTS IN THE FINNISH LABOUR MARKET

An increasing withdrawal from the labour market and a gradually shrinking size of the cohorts entering the labour market are two principal economic issues associated with the onset of demographic ageing. Labour shortages that may occur in the future in Finland may lead to a reduction in economic growth. According to OECD projections, the Finnish labour force will contract between 2020 and 2050 at an annual rate of 0.40% (OECD, 2004: 37).

The decisions about immigrating to Finland vary based on the nationality of the immigrant. Prevailing reasons are: studies, work or marriage. This applies primarily to newcomers from Russia, Sweden, Estonia, Great Britain, and Germany. Somali and Iraqi immigrants, on the other hand, had arrived in Finland as refugees from their home countries. The same is true of immigrants from Bosnia-Herzegovina and Vietnam (Heikkilä, 2002: 19).

Table 1. Employment and unemployment rates among foreign citizens in Finland in 2008

Nationality	1	2	3	4
Finland	67.09	8.94	9.98	7.87
Foreign countries	51.16	19.16	16.40	22.97
Estonia	66.55	10.72	10.54	10.88
Germany	62.13	7.26	6.88	8.00
Iraq	18.44	60.94	55.22	79.56
Russia	45.88	27.80	22.20	32.35
Somalia	19.01	55.15	47.03	69.32
Sweden	60.18	11.85	12.53	10.76
United Kingdom	64.37	10.06	10.51	7.57

Explanation: 1 – total employment rate (%); 2 – total unemployment rate (%); 3 – unemployment rate among men (%); 4 – unemployment rate among women (%)

Source: Own calculations based on Statistics Finland

In the data description Statistics of Finland specifies that the total number of individuals in the labour force consists of the working-age population (aged 15–64) except students, military conscripts, homemakers, etc. The total unemployment rate for foreigners in Finland, calculated as a share of unemployed foreigners in the ‘foreign labour force’ in Finland, is twice as high as for the general Finnish population (Table 1). Moreover, it is the highest for immigrants from less developed

countries in Asia and Africa. More than half of Somali immigrants and almost 61% of Iraqi immigrants in the Finnish labour force remained unemployed in 2008. The unemployment rate for immigrants from Russia was also significantly high. Only half of the foreign population of working age (aged 15–64) was employed in 2008. The total employment rate was calculated as a proportion of employed individuals in the working-age population. Employment rates among Estonians and Britons were similar to those of the general Finnish population, whereas the employment rates for Somalis and Iraqis were less than 20%. A substantially higher unemployment rate among Somali and Iraqi women confirms the suggestion that a significant proportion of foreign women tends to stay at home and take care of their families rather than work outside the home. Hence, they are counted as ‘not in the labour force’.

Although the introduction of a new labour force to the labour market appears to be profitable from the perspective of economic growth, the new immigrants’ actual path to employment is often difficult. The key obstacles mentioned by immigrants in Finland include insufficient language skills, potential employers’ lack of recognition of college diplomas, and other qualifications obtained abroad, general employer prejudice, a low degree of respect for foreign workers as well as general discrimination (Heikkilä, Peltonen, 2002: 5). Language proficiency requirements normally prolong the job search. Moreover, most first jobs given to immigrants are jobs in the cleaning or catering industry. The fact is that if well-educated immigrants are not able to find satisfying employment, they will most likely move on to another foreign country (Heikkilä, 2002: 16). In light of the growing elderly population and the shrinking labour force, Finland is likely to experience increasing demand for workers in fields such as health care and general elderly care. Current trends in immigration to Finland, especially the influx of foreigners from Western Europe, may have a positive effect on the educational level of the foreign population in the country. Finland needs to attract skilled and well-educated individuals by enabling them to easily enter the Finnish labour market.

SELECTED ISSUES IN FINNISH IMMIGRATION POLICY

A proactive immigration policy involves changes in administrative, social and educational areas. The integration of immigrants with general society is an essential part of a proactive immigration policy in the traditionally homogeneous and ‘closed’ Finnish society. The basic act of law regulating the status of immigrants in Finland is the *Aliens Act* (301/2004). The document is designed to define the rights and obligations of foreigners in Finland with respect to a variety

of basic issues such as arrival in the country, the granting of citizenship, access to medical care, etc. The *Act on the Integration of Immigrants and Reception of Asylum Seekers* (439/1999) contains an outline of Finnish immigrant integration policy. According to this document, 'integration, equality and freedom of choice for immigrants through measures which help them to acquire the essential knowledge and skills they need to function in society' and ensuring 'the essential livelihood and welfare of asylum seekers by arranging for their reception' are key elements of Finnish immigration policy. Integration is defined as self-development of the immigrant, especially through active participation in the labour market. His or her original culture and language are perceived as particularly valuable. The integration plan is based on providing immigrants with support including language skills, vocational training and counselling, and the education of immigrant children. All actions are based on the agreement between local authorities, the local employment office and the immigrant in question. Both registration as an unemployed jobseeker and application for social assistance entitles an immigrant to an integration plan (*Act on the Integration of Immigrants and Reception of Asylum Seekers*, 1999). Immigrants intending to stay permanently in Finland are eligible to obtain social security benefits based on the *Act on the Application of Residence-Based Social Security Legislation* (1573/1993). Disability and advanced age entitle immigrants to Special Assistance for Immigrants on the condition that they have been residing in Finland for a consecutive period of at least 5 years immediately prior to the granting of the financial assistance (KELA, 2010: 360).

As the number of immigrants has increased over the last 30 years, issues related to migration policy have become the subject of discussion for the Finnish government. In order to participate in the immigration debate in one way or another, a group of influential immigrants is currently working on the establishment of an independent and non-political Immigrant Parliament of Finland (IPM). The project aims to unite the interests of immigrants from different backgrounds. The election of fifty IPM members is scheduled to take place together with Finnish Parliamentary elections in April, 2011 (Official site of the Immigrant Parliament of Finland: <http://www.ipf.fi/ipf/>).

Finland has introduced fixed annual quotas for refugees and asylum seekers (750 in recent years). The Finnish Parliament sets the annual quota, taking into consideration the national budget for the current fiscal year (Official site of the Finnish Immigration Service: <http://www.migri.fi>). There also exist certain regulations that apply to Ingrian Finns moving to Finland. They are required to prove their knowledge of the Finnish or Swedish language (at least A2 level) and to have accommodations arranged in Finland. Moreover, Ingrian Finns need to

be on a waiting list and must complete a form concerning their educational and vocational background as well as job preferences. In order to match the labour force with the demand for workers, the job forms are sent to employers and municipalities who express an interest in new workers (Saarto, 2007: 17–18).

Population projections for Finland assume that immigration will remain at a stable level for the next 50 years. In light of potential labour shortages in the future, Finnish immigration policy should be based on incentives that would attract young and well-educated immigrants. Current Finnish immigration policy creates an image of an immigrant actively participating in the labour market, fluent in the Finnish language, highly skilled, eager to integrate with the local community, and constantly developing new skills.

CONCLUSIONS

The influx of immigrants creates both opportunities and challenges, especially for a homogeneous society such as that in Finland, which is not used to large numbers of immigrants. Therefore, it is essential to recognize the different characteristics of immigrant populations. The key strengths of immigrants and immigration policy in Finland are: (a) favourable age structure of the newcomers (79.5% of working age); (b) possibly positive influence on birth rate and rejuvenation of Finland's age structure (the birth rates for Somalis and Iraqis twice as high as for the whole population of Finland); (c) immigration policy based on integration; (d) the development of skills and the pursuit of equality and respect for cultural diversity as the basic rules in the immigrant integration process. On the other hand, the key weaknesses are: (a) attitudes and prejudices of employers; (b) obstacles in the job recruitment process such as a lack of recognition of foreign college diplomas and a lack of Finnish language skills among immigrants; (c) unemployment rate among foreigners twice as high as Finland's national rate; (d) low participation of female immigrants from the less developed countries in the labour market; (e) relatively low educational level of immigrants (especially among refugees).

A national policy of attracting immigrants in order to offset a shrinking domestic labour force should include the creation of support systems for the newcomers but one that does not overly burden the national budget and does lead immigrants down the path to full employment. Educational programmes, vocational training and the promotion of long-term employment (both among employers and the unemployed) should help immigrants to fully participate in the labour market and should be key elements of a proactive immigration policy.

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AGEING AND QUALITY OF LIFE – NEW RESPONSES FROM THE REAL ESTATE SECTOR IN PORTUGAL (1)

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ABSTRACT. In the second half of the 20th century, the history of European demography is associated with a pronounced and widespread process of ageing. The 21st century will have to cater to the needs of an elderly population in transformation. Portugal is also part of this process and in efforts to improve the quality of life of the elderly, a wide range of facilities, services and social responses have been established by a variety of promoters, targeting several social levels. This paper will analyze a specific segment directed at an exclusive niche of the elderly population, the Senior Residential Condominiums. This is a very recent segment of the housing market, with high levels of comfort, quality, sanitation, health, and recreation, essential to full well-being. The paper intends to characterize this real estate market niche so as to identify its distinctive features, the promoting agents and how they can contribute to residents' quality of life.

KEY WORDS: Portugal, ageing, quality of life, senior residential condominiums.

INTRODUCTION

Ageing is a characteristic of modern societies. Nonetheless, this process does not unfold the same way in all countries throughout the world, reaching higher rates in the developed countries. The United Nations predict that the number of individuals over 60 years old will reach 2 billion in 2050, representing approximately 22% of the world population (United Nations, 2009). According to this outlook, the number of individuals with more than 60 years of age will exceed for the first time that of individuals aged 15 years and less in 2045.

Marked differences exist between developed and developing regions in the number and proportion of older persons. In the more developed regions, over a fifth of the population is currently aged 60 years and over and by 2050, nearly a third of the population in developed countries is projected to be in that age group. In the less developed regions, older persons account today for just 8% of the population but by 2050 they are expected to account for a fifth of the population, implying that, by mid-century, the developing world is likely to reach the same stage in the process of population ageing that the developed world is already at (United Nations, 2009).

Population ageing results mainly from reductions of fertility that have become virtually universal. The resulting slowdown in the growth of the number of children coupled with the steady increase in the number of older persons has a direct bearing on both the intergenerational and intragenerational equity and solidarity that are the foundations of society (United Nations, 2009).

The process underlying global population ageing is known as the ‘demographic transition’, a process whereby reductions in mortality are followed by reductions in fertility. Decreasing fertility along with increasing life expectancy has reshaped the age structure of the population in most regions of the planet by shifting the relative weight of the population from younger to older groups. The role of international migration in changing age distributions has been far less important than that of fertility and mortality (Lesthaeghe, 2004).

Particularly at the earlier stages of the demographic transition, reductions in fertility are the primary determinants of the timing and extent of population ageing. However, as later stages of the transition are reached, reductions in mortality, particularly at older ages, contribute more to increasing number of older persons, thus accelerating population ageing.

Decreasing fertility has been the primary cause of population ageing because, as fertility moves steadily to lower levels, people of reproductive age have fewer children relative to those of older generations, with the result that sustained fertility reductions eventually lead to a reduction of the proportion of children and young persons in a population and a corresponding increase of the proportions in older groups (Szymańska et al., 2009).

The reduction of fertility has been dramatic since 1950. At the world level, total fertility has dropped almost by half, from 4.9 children per woman in 1950–1955 to 2.6 in 2005–2010, and it is expected to keep on declining to reach 2.0 children per women in 2045–2050 (United Nations, 2009).

As a result of the sustained decline in fertility that occurred in developed countries during the 20th century, total fertility in the more developed regions has dropped from an already low level of 2.8 children per woman in 1950–1955 to an

extremely low level of 1.6 children per woman in 2005–2010. This level is well below that needed to ensure the replacement of generations. In fact, practically all developed countries are currently experiencing below-replacement fertility (United Nations, 2009).

Major fertility reductions in the less developed regions occurred, during the last three decades of the 20th century. From 1950–1955 to 2005–2010, total fertility in the developing world dropped by over half from 6.0 to 2.7 children per woman (United Nations, 2009).

As fertility levels drop, mortality has also continued to decline, especially at older ages. When fertility reaches low levels and remains low, reductions in mortality at older ages gain importance as a cause of population ageing. In developed countries, in particular, where low fertility has prevailed for over three decades, increases in the proportion of the older population are now primarily caused by increasing survival to advanced ages (Grundy, 1996).

Population ageing is profound, having major consequences and implications for all facets of human life. In the economic area, population ageing will have an impact on economic growth, savings, investment, consumption, labour markets, pensions, taxation, and intergenerational transfers. In the social sphere, population ageing influences family composition and living arrangements, housing demand, migration trends, epidemiology, and the need for health care services.

As of the second half of the 20th century, the history of European demography is associated with a pronounced and widespread process of ageing throughout the continent, as a result of the shift towards a demographic pattern marked by low fertility and mortality rates and the ensuing increase in the average life expectancy, associated with scientific and technological progress in the medical sciences.

Population ageing presents the following relevant features: growing feminization due to increased female life expectancy, progressive solitude and isolation, and a significant growth of elderly groups. According to the United Nations, the number of elderly persons aged 80 and over is rapidly increasing worldwide (approximately 4% per year) and 1 in every 5 elderly individuals will be 80 years old and over by 2050.

As in other countries worldwide and particularly in Europe, progressive ageing has also taken place in the Portuguese population. Over the last few decades, elderly population rates increased from 8% in 1960 to 16.5% in 2001, reaching 17.4% in 2008. The population ageing trend in Portugal is expected to continue to grow over the next years. Estimates indicate that one third of the national population will be aged 65 and over in 2060 (National Statistics Institute, 2009).

In recent years, there has been a pronounced growth in the supply of services and care provided to the elderly by formal institutions and informal caregivers.

This situation is entailed by both demographic ageing and especially lesser involvement of family members in providing care to their elderly relatives, suggesting higher income to support third-party service expenses.

Within the European context, Portugal is among the countries in which family values are as still of great importance, which explains the existing lower penetration rates of elderly services and care despite the significant increase over the last few years. The public sector and non-for-profit organizations supported by the Government account for approximately 80% of the supply, mainly targeted at more underprivileged populations. The private sector caters for the higher-income segment.

This paper will analyze a specific segment directed at an exclusive niche of the elderly population, the Senior Residential Condominiums. This is a very recent segment in the housing market, with high levels of comfort, quality, sanitation, health, and recreation, essential to ensuring full well-being.

The paper aims to characterize this real estate market niche so as to identify its distinctive features, the promoting agents and how they can contribute to the residents' quality of life. This research is still in progress and also intends, in a second phase, to conduct a survey on a sample of residents, mainly in facilities located within the Porto Metropolitan Area. The purpose consists in gaining insight into the motivations behind the choice for this market segment, and to characterize the residents' profile as well as their satisfaction in relation to the facilities and services provided.

SENIOR RESIDENTIAL CONDOMINIUMS

The concept of senior condominium was very recently introduced in Portugal with a view to explore a differentiated housing market segment, which is structured in terms of consumer segmentation and individualization in the post-Fordist context.

This market segment only emerged at the beginning of the 21st century, at the end of the rising real estate cycle begun in the second half of the 1980s, when the widespread trust in real estate investment profits was already being called into question because of the repetitiveness of supply and its general lack of quality. It was the end of a rising cycle in which the most alarming news on the international real estate crisis only surfaced later on. The end of a period in which the growing professionalization of the real estate sector also concurred with the perception of a social change centred on family changes, among which the most notable are reduced family size, ageing of family nuclei, increased rate of individuals living alone, changes in lifestyles, and higher demand in terms of quality housing.

Senior condominiums respond to population ageing with a view to meet the demand of autonomous, high-income individuals in retirement, seeking to retain a certain independence and quality of life. These condominiums are of a residential nature, consisting of apartments or detached houses (more common in the United States, for instance), and their image is of singularity, in addition to a range of support services offered – leisure, personal and health.

‘Continuing Care Retirement Communities’ is the inspiring concept of this market niche. The concept emerged in the post-war United States but greatly expanded during the 1980s and has been developed in several countries ever since. ‘Continuing Care Retirement Communities, or *life care* communities, are residential campuses consisting of independent apartments and cottages and a variety of social and health services in one setting. Usually a nursing home is one or near the campus’ (Rivlin, Wiener, 1988: 83).

According to Portuguese Social Security nomenclature (2006: B1.6), the closest concept found to include residential condominiums for senior citizens is residence – ‘social response, developed in facilities, consisting of a number of apartments with common use areas and/or services for elderly persons or others with total or partial autonomy’.

Assisted-living residences are also included in this concept. As described further ahead, senior condominium operators have also been promoting assisted-living residences, given their almost identical philosophy. It is worth noting that assisted-living residences have been promoted by non-profit institutions for social solidarity and public institutions (central and local government), and are directed to the target audience with less autonomy and lower income.

Assisted-living residences can be defined as ‘Any residential group program that is not licensed as a nursing home, that provides personal care to persons with need for assistance in daily living, and that can respond to unscheduled needs for assistance. The key philosophical principles or tenets that distinguish assisted living are: services and oversight available 24-hours a day; services to meet scheduled and unscheduled needs; care and services provided or arranged so as to promote independence; an emphasis on consumer dignity, autonomy and choice; an emphasis on privacy and a homelike environment’ (Hawes, Phillips, 2000: 2).

With these features in mind, senior residential condominiums appear to be structures that marketing has designed as a real estate concept like ‘exclusive condominium’ targeting well-defined social strata. A modern and prestigious urban structure that adds value to the imaginary, symbolic, social, and individual residential utopias, with a strong image of singularity which is expressed by the architectural concept itself as well as the advertising slogans used to promote the facilities.

THE SUPPLY – EXISTING AND PLANNED FACILITIES IN PORTUGAL

In Portugal, Senior Condominiums supply is mainly clustered in the two metropolitan areas (Lisbon and Porto) and promoted by four financial and economic groups. In 2010, the first of such enterprises to be undertaken by a religious institution closely linked to health care (*Ordem Terceira de S. Francisco do Porto*) was opened – *Residência Rainha Santa Isabel* in Porto city.

The first Senior Condominiums were built in Lisbon – the *Junqueira* (2004) and *Expo* (2005) promoted by the José de Mello Group.

In addition to this economic group, stand out, yet the groups, *Espírito Santo Saúde*, *Carlton Life* and *Montepio Residências e Serviços*.

The groups initially started their activity by providing medical care services, later taking advantage of the existing clinical and business structures to expand their supply of services and thus meet the demand for residential care (CEDRU, 2008: 157).

In the case of Montepio, the process began by building residences. Since the group never owned a health care unit, medical assistance agreements were later established for the provision of medical and nursing services in residences. The group currently owns five operational residences, as follows: *Residência Montepio Breiner* in Porto city, *Residências Montepio Gaia* in Vila Nova de Gaia (Porto Metropolitan Area), *Residências Montepio Coimbra* in Coimbra city, *Residências Montepio Parede* in Cascais (Lisbon Metropolitan Area) and *Residências Montepio* in Montijo (Lisbon Metropolitan Area). The latter three recently opened in 2009. Aside from these, the facilities in Braga city and Lisbon – Expo are expected to open doors in 2011 and 2012.

The *Residência Montepio Breiner*, operational since 2008, resulted from the rehabilitation of part of a building complex located in a block enclosed by the streets of *Torrinha*, *Cedofeita*, *Rosário* and *Breiner*, where there used to be a manufacturing plant. Part of the old factory facade and chimney were preserved. The facilities include car parking, a heated indoor swimming pool, a gymnasium, a garden, en-suite rooms (double or single), and studio apartments, with a capacity for 119 residents. It was built in compliance with modern principles of sustainable architecture: thermal insulation, natural light to all rooms to reduce heating and air conditioning costs, solar panels for domestic hot water supply, and swimming pool pre-heating. Additionally, a range of common areas and support services are provided – living rooms, dining rooms, laundry, personal hygiene, hairdresser, aquatic therapy, socio-cultural animation, cinema, music, library, religious service, nursing care, medical assistance, and follow-up by therapists for a variety of conditions.

The *Residências Montepio* in Gaia, Coimbra, Parede and Montijo were built from scratch, based on the same principles of sustainable building design, and offer the same type of support services. The difference is that there are only single and double en-suite rooms, a concept which is closer to that of an assisted-living residence, but with the quality of a five-star hotel, making it distinct from the concept of senior condominium. The residences accommodate 119 residents in Gaia, 105 in Coimbra, 102 in Parede and 120 in Montijo, the latter with a separate unit for 35 Alzheimer's patients.

The residence of the *Carlton Life Group* is located next to *Rotunda da Boavista* in Porto and is part of the *Hospital Privado da Boavista* complex, a private hospital also owned by the group. It is not strictly speaking a senior condominium but rather an assisted-living residential unit with rooms for permanent or temporary stays and a range of support services: geriatric assessment unit, functional rehabilitation unit, cleaning services, laundry, living rooms, activities, meals, and also a day unit for older persons who are still able to spend nights in their own homes.

The *José de Mello Group* was pioneering in the supply of senior condominiums. The group's *Junqueira* condominium with 19 apartments and the *Expo* one with 49 are housing facilities consisting of one and two bedroom apartments, including a private kitchen and house cleaning services, laundry, nursing care, a chapel, and library. There are assisted-living residences nearby offering a range of therapy, nursing and medical services. They also offer permanent and temporary accommodation, in addition to leisure and cultural activities, plus two health care units: *Clínica Cuf Sta. Maria de Belém* and *Hospital Cuf Descobertas*, owned by the group.

For each apartment, there are two parking spaces and basement storage. All apartments are unfurnished so that residents may decorate as they please. The resident pays a permanent use right according to age. Should any changes occur, for instance, a resident decides to leave, becomes ill or moves to an assisted-living residence, the initial amount will be reimbursed according to period of time used. This reimbursement can also be returned to the heirs if the expected life span is not reached.

These condominiums allow family members and friends to visit or spend a given period of time with no schedule limitations. Residents are also allowed to organize parties as a way to maintain their family and social relationships, just as if they were living in their previous homes.

In addition to these two condominiums, the *José de Mello Group* owns another assisted-living residence in Parede, Cascais, with a seafront view and a swimming pool, which has been very popular for temporary stays, especially in the summer (Fig. 1).



Fig. 1. Assisted-living residence in Parede, Cascais (Lisbon Metropolitan Area)

Source: www.josedemellosaude.pt/vPT/JMRS/Paginas/Homepage.aspx

The growing demand for temporally stays led the group to develop a new strategy. They established an agreement with Star, a travel agency owned by the *Sonae Group*, targeted at foreign high-income elderly retirees to spend certain periods of time in Portugal. Here they will find all the comfort of a five-star hotel in assisted-living residences, in addition to nursing care, a range of therapy treatments and medical services, as well as leisure and cultural activities in facilities with no physical obstacles.

The *Espírito Santo Saúde Group* owns *Casas da Cidade* in Lisbon and *Clube de Repouso Casa dos Leões* in Carnaxide, Oeiras (in Lisbon Metropolitan Area).

Casas da Cidade is located near a hospital which is also owned by the group – *Hospital da Luz*. It has 115 apartments, consisting of 30 studio apartments, 63 one-bedroom apartments and 22 two-bedroom apartments. Studio apartments range from 39 to 82 m², one-bedroom apartments from 64 to 95 m², and two-bedroom apartments from 88 to 132 m². All apartments include a fully equipped kitchenette, bathrooms with no architectural obstacles, a central heating and cooling system, cable TV, and internet. There are also several common areas for leisure, catering, a hairdresser, cleaning and daily housekeeping, laundry, meals, health care, and personal support services.

The *Repouso Casa dos Leões* club opened in 2003 and consists of 57 housing units, of which 27 are one-bedroom apartments with a private area of 51 m² and 30 are studio apartments with areas ranging from 18 to 30 m².

This residence is a complex of 4 buildings: two are only housing units; one includes dining and living rooms, a bar/cafeteria, a solarium, a gymnasium, and

offices for the provision of health care support services (medical, nursing and physical therapy); and the other includes housing, a game room and hairdresser, a living room, dining rooms, offices for the provision of health care support services, a kitchen, a laundry room, administrative services and also daily housekeeping, laundry, and a meal-ordering service (Fig. 2).

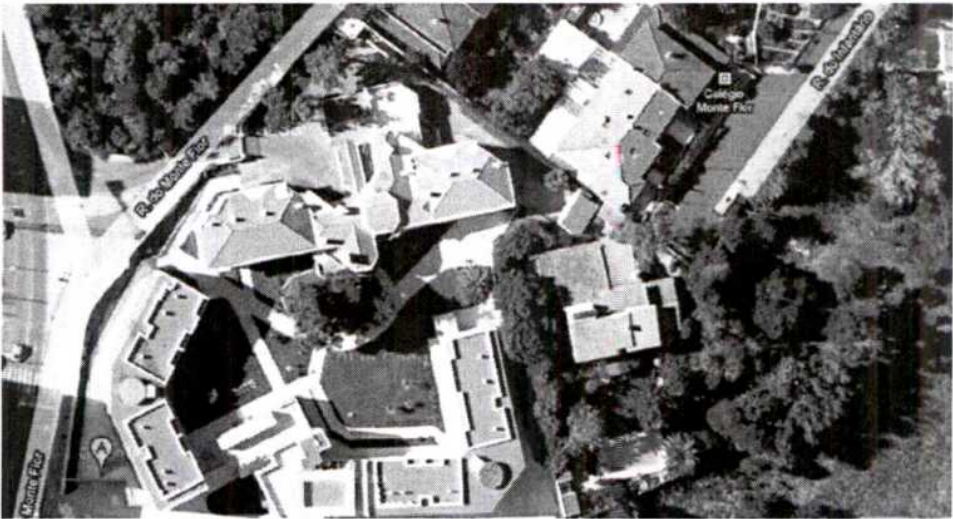


Fig. 2. Clube de Repouso Casa dos Leões, Oeiras (Lisbon Metropolitan Area)

Source: Google Maps

The *Residência Rainha Santa Isabel da Ordem Terceira de S. Francisco do Porto* consists of single and double apartments and en-suite rooms, with the option of being decorating and furnished by residents and also including a range of support services (meals, laundry, personal hygiene care, leisure activities, hairdresser, gymnasium, and private parking), medical and nursing assistance and a chapel.

Based on the marketing analysis of some of the studied facilities, it can easily be understood that the aim is to sell an exclusive product with all the comfort, quality and safety, in which value is added to social relationships as well as an active, affective and balanced ageing process in a space with specialized and technically high-quality services.

In relation to the price rates applied in the different condominiums, they range considerably depending on modality of use, whether or not an admission fee was paid, and number of rooms, as shown in Table 1.

Table 1. Rates at some condominiums

Apartment Types	PUR ≥ 65 years Admission €	Monthly Rate € (a)	PUR ≥ 65 years Admission €	Monthly Rate €	TUR Monthly Rate € (b)
<i>Casas da Cidade</i>					
Studio					
39–82 m ²	78,000 to 128,000	–	53,000 to 87,600	–	–
1 st resident	–	1,570	–	–	2,320
2 nd resident	–	942	–	942	942
1 bedroom apartment	115,400 to 144,300	–	78,500 to 98,100	–	–
64–95m ²					
1 st resident	–	1,760	–	1,760	2,730
2 nd resident	–	1,056	–	1,056	942
2 bedrooms apartment	161,000 to 232,000	–	96,600 to 139,200	–	–
88–132 m ²					
1 st resident	–	1,880	–	1,880	3,200
2 nd resident	–	1,128	–	1,128	1,128
<i>Clube de Repouso dos Leões</i>					
1 bedroom apartment	99,000	–	68,000	–	–
1 st resident	–	1,785	–	1,785	2,750
2 nd resident	–	893	–	893	893
Special studio	66,000	–	45,000	–	–
1 st resident	–	1,580	–	1,580	2,270
2 nd resident	–	790	–	790	790
Standard studio	44,000	–	31,000	–	–
1 st resident	–	1,440	–	1,440	1,940
2 nd resident	–	720	–	720	720
Plain studio	33,000	–	23,000	–	–
1 person	–	1,440	–	1,440	1,940
<i>Residências Montepio</i>					
Studio	–	From 1,650	–	From 1,650	–
Double room	–	From 1,805	–	From 1,805	–
Single room	–	From 2,280	–	From 2,280	–
José Mello Group	40,000 to 60,000		40,000 to 60,000		–
		From 950		From 950	–

Explanation: (a) Meals and basic services included, medical services not included; (b) 1 month stays, less than a month also possible; PUR – Permanent Use Right; TUR – Temporary Use Right

Source: Information provided by Companies

Considering the applied rates, it is very clear that this market segment is targeted at high-income retirees, a relatively small group of the Portuguese elderly population, as demonstrated by a national survey conducted by CEDRU on a sample of 1,324 individuals aged 55 years and over, of which 16% had a monthly income above 751€ (CEDRU, 2008: 41). Precisely due to the poor financial resources of the Portuguese elderly population, in the first few years, the demand and occupancy rates of senior condominiums were well below what promoters had expected.

In terms of scenarios of evolution as to the supply, the promoters do not consider the possibility of expanding their current capacity, except the *Montepio Group* which is the only one to present a certain dynamic. Another feature with some potential seems to be the intent to attract foreign high-income clients.

Another obstacle concerns demand, elderly people who are still nimble and autonomous would rather stay in their own homes, with which they have already established strong ties of ownership and where they keep memories, are acquainted with their neighbours, welcome family and friends, and often take care of their grandchildren.

Moving to a new space where neighbours as strangers and memories are only kept in the belongings they bring with them, even considering the range of services offered in senior condominiums as well as a close relationship with family and friends, the change is never easy. Another obstacle has to do with ‘purchasing a permanent housing right’ since it is not hereditary and thus reduces the inheritance they would transfer to family members.

CONCLUSION

To conclude, the senior housing market segment is targeted at the high-income social class, taking into account the high price rates applied by the promoters of such facilities.

Senior residential condominiums are a very recent supply, physically clustered in the two metropolitan areas (in addition to other existing and planned facilities in a few medium-sized cities). Promoted by major groups and due to the high levels of financial support required, such condominiums are managed by financial institutions or health care providers with consolidated experience in the field, a situation which led promoters to broaden their services to include assisted-living care.

The supply is characterized by high-quality facilities where safety, exclusiveness, comfort, active, and healthy ageing are emphasized, within the conception of a five-star hotel.

Emphasis on safety is presented as a multi-dimensional concept that includes: health, through permanent nursing and medical services provided: urban, given the structure of a closed condominium that limits access to strangers; physical, associated to the needs of this age group for a detailed design of housing and support areas; affective, through personalized house decoration, the freedom to bring personal and affective objects to the new home, keeping in touch with family members and friends with no scheduled hour limitations, providing a sense of continuity in relation to the former home, essentially emotional and biographical.

The issue of housing ‘hotelization’ is fulfilled through the range of services provided (housekeeping, meals, laundry, reception, and call centre) which is complemented with additional facilities (swimming pool, chapel, gymnasium, workshops, cinema, library, and hairdresser) and several leisure-time activities.

In condominiums for senior citizens, services are based and provided within the premises and are for shared use by residents. In other words, a concentration in the residential area of life in its various forms, that is, the home-service model in which domestic activities gain a logic of consumption (model defined by Platzer, 1992).

As regards the evolution of supply, operators do not seem interested in expanding their business given the experienced difficulty in attracting clients. The situation will most likely probably get worse considering the current economic crisis. However, some promoters have sought to attract a new demand segment with some potential: foreign seniors, especially from Northern Europe.

NOTES

- (1) A poster of this article was presented in the ‘European Conference on Complex Systems 2010’ (ECCS’10), in 14 to 17 September 2010, at Lisbon University Institute (ISCTE).

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THE DEMOGRAPHIC ASPECT OF CONTEMPORARY URBAN PROCESSES (THE CASE OF PORTUGAL)

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ABSTRACT. In the last decades in most European countries urbanization can be observed, characterized by a tendency towards expansion of big cities into their environs with a decreasing number of inhabitants living in urban cores (urban sprawl). The result is networked, poly-centric forms of concentration. These new structures are the result of the changes in the organization of the production process, the increasing role of the service and information based economy and the growing mobility of the population.

The aim of this paper is to present the demographic aspect of urban processes in Portugal, in the country as well as in the Lisbon Metropolis Area.

KEY WORDS: Portugal, Lisbon Metropolitan Area, urbanization, urban sprawl, migrations, natural increase, settlement system.

INTRODUCTION

In the analysis of urbanization in Europe in 1950–70 Hall and Hay (1980) identified considerable variability in urban trends. In Great Britain they found a strong tendency towards decentralization of the population away from urban cores, akin to the North American pattern. Similar trends could be observed in Northern Europe, but in a later period. In Italy, Spain and Portugal centralization of the population was still the norm.

Now, at the beginning of the 21st century the pattern of urbanization similar to the American pattern is becoming common in Europe (Kasanko et al., 2006). This phenomenon can be observed in such countries like Portugal and countries of Eastern Europe. In these countries to some extent political events have influenced on processes of urbanization. Carnation Revolution (1974) and membership in

European Community (1986) were important for Portugal, in turn transformation of political system (1989) – for Eastern Europe.

It was decided to analyze the example of Portugal and the most important Portuguese metropolitan area – Lisbon.

MODERN URBANIZATION

Processes of urbanization are influenced by factors related to the economy, transport, the settlement system, and population (Fig. 1). The globalization trends have led to increasing international competition between cities for economic activities. The role of agriculture and the manufacturing industry is diminishing, and the significance of the tertiary sector is growing. A new location pattern forces activities to seek sites in fringe or suburban areas, where prices of parcels are lower.

Throughout the 20th century the combination of rising car ownership and highway building caused to reduce transport cost and allowed developments to sprawl at greater distances and residents to live at greater distance from their places of work, shopping and leisure.

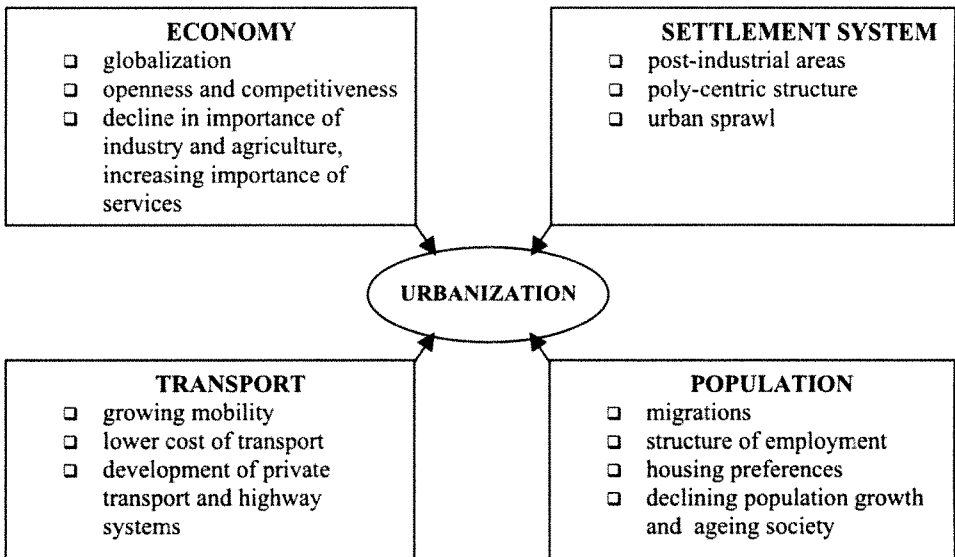


Fig. 1. The influence of economy, settlement system, transport and population on urbanization

Source: Developed by the author

Urban functions have been transforming. Many small towns have been losing their supply functions for rural areas (Heffner, 2005). Towns having strong roots in the secondary sector are in economic downturn. The collapse of industrial activities has caused social problems (Węclawowicz, 2003) and the emergence of degraded post-industrial sites. Retail functions are locating in suburban or even in out-of-town locations. Financial services prefer large urban centres.

The housing preferences are reflected in demand for low density and single family homes. Rising real incomes and a high level of car use allow people to live in better conditions outside the city. It has encouraged the dispersal of residences besides the dispersal of economic activities. The car has facilitated isolated urban development in a wide urbanized zone around the city proper. What the car has done is to greatly speed the processes by which cities are losing population and functions from their centres. In the United States of America such low density and uncoordinated urban growth, urban sprawl, were reinforced after the Second World War. An assessment of this phenomenon is generally negative because urban sprawl means loss of agricultural land, environmental degradation and crowded roadways (Ewing, 1994; Chin, 2002; Litwińska, 2008).

There can be no doubt of the enormous importance of these processes in the polarization of settlement systems and developing large cities.

The demographic aspect of the urban processes belongs to the most important (Domański, 1997, 2005; Szymańska, 2007, 2009; Parysek, 2008). Focusing on this aspect the following should be taken into consideration: migrations, natural increase and social mobility.

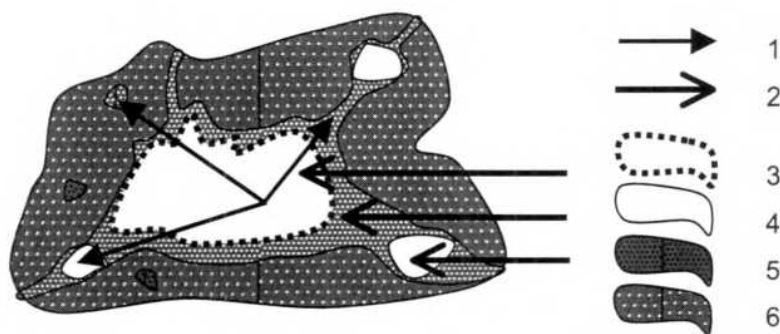


Fig. 2. The schema of main types of population movements during urbanization in metropolitan areas

Explanation: 1 – movement from metropolis; 2 – migration to metropolitan area; 3 – metropolis; 4 – small and medium size towns; 5 – area of urban sprawl; 6 – zone of influence of metropolis

Source: Developed by the author

Nowadays movement from villages to towns and cities plays a smaller role in Europe. Metropolitan areas, as the most dynamic developing elements of settlement systems, are becoming destinations for interregional and international migrations. In these areas there can be observed urban sprawl, the exodus from the metropolis to the fringes, along highways and commuter railway lines and to small and medium size towns lying in the zone of influence of big cities. Development can be scattered with the tendency to discontinuity because it leap-frogs over some areas (Fig. 2).

Since the mid-1960s in many developed countries international migration has become the main source of growth in the population. The decline in population in cores of big cities is affected not only by the escape of richer inhabitants, but also by reducing population growth and ageing.

The change in the number of the urban population may also have a non-spatial nature. After abandoning agricultural activities and accepting the urban lifestyle the rural population living in an area of urban sprawl is becoming an urban population.

URBANIZATION IN PORTUGAL

Situated in extreme southwest corner of Europe Portugal occupies 1/6 of the Iberian Peninsula, bordered by the Atlantic Ocean to the west and south and by Spain to the north and east. Continental Portugal counts approximately 10 million inhabitants and has an area of approximately 92,000 square km.

Until the middle of the 20th century Portugal was the rural country. In the second part of this century there were dramatic changes in relocation of population (Table 1) (Rodrigues, 2009).

The process of urbanization started in the 1950s and was particularly intense in the 1960s and 1970s. In the decade of 1960s the rural exodus started. For the period 1950–1970 some municipalities lost more than 50% of their population

Table 1. Portugal. Change of population (%) in 1960–2001

	1	2	3
Lisbon	0.6	–17.8	–14.9
Lisbon Metropolitan Area	64.2	1.5	5.6
Porto	7.9	–7.6	–13.0
Porto Metropolitan Area	33.8	4.5	8.0
Continental Portugal	12.6	0.4	5.3

Explanation: 1 – 1960–1981; 2 – 1981–1991; 3 – 1991–2001

Source: Marques da Costa, 2007

and simultaneously the number of inhabitants increased in the surroundings of Lisbon and Porto as well as in areas located on the coastal zone from Viano do Castelo to Setubal (Gaspar, 1980).

Most of the urban expansion in the 1980s and 1990s in urban areas of Lisbon and Porto had the form of urban sprawl (suburbanization) along the main routes and completing the discontinued urban fabric of cities. Also it was a spectacular growth in small and medium-sized town in Algarve coastline and along coast of Atlantic Ocean (Gaspar, 1980; Soares, 2002).

According to The Portuguese National Spatial Policy Program (PNPOT): 'The evolution of the urban system in Portugal has as its background two complementary trends: depopulation of many rural areas and urbanization of population. The process of urbanization in Portugal resulted in a setting of the urban system characterized by: (a) two metropolitan areas of Lisbon and Porto with dynamics and processes that differentiated internal structure, which brought together a large dimension (population and physical) in national terms with fragile international functional projection; (b) an extensive coastline urbanization with diffuse where emerge some polynuclear systems and several large urban centres; (c) a linear urbanization along the Algarve coast; (d) a network of small and medium-sized cities within, in some cases configuring axles and urban multi-pole system' (PNPOT, 2007: 56).

Portugal belongs to the European countries with a relatively low rate of urbanization. While in Europe the fraction of the population living in urban areas equals 73%, it is estimated that in Portugal this indicator is 55%. In contrast, if we take into consideration the population living in towns and cities it appears that the indicator equals only 39% (2004). During the period 1991–2001 the urban population growth was 3.9%, while for the whole population, 5%. It was caused by the depopulation of Lisbon and Porto and urban processes in new areas (Atlas das Cidades de Portugal, 2004).

Inhabitants of continental Portugal are not evenly distributed. The average density is 111 persons per square km, but some districts are much more crowded than others. The eastern districts bordering Spain have the lowest population density. Coastal districts from the northern border down to Setubal are densely populated. The highest concentration of people is registered in Lisbon and Porto districts (Fig. 3).

The difference in the population density is the result of many factors: topography, interregional and international migrations, history (Portugal was engaged in expansion towards Africa, Asia and South America), and nowadays the quickly developing metropolitan areas of Lisbon and Porto.

In the period 1991–2007 (Table 2) the Portuguese population increased, but Portugal remains a country with low fertility and decreasing net migration.

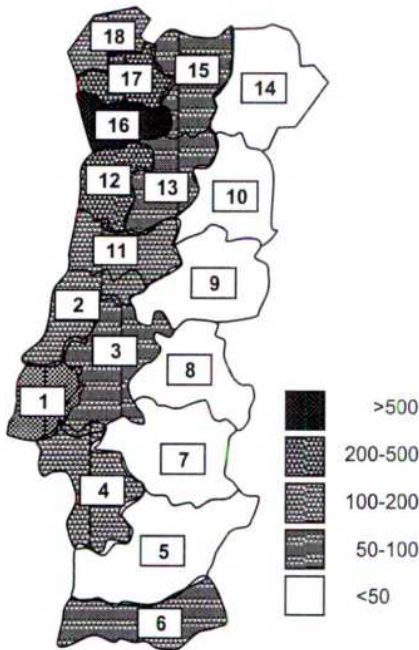


Fig. 3. The population density in Portugal (persons per square km)

Explanation: 1 – Lisbon; 2 – Leiria; 3 – Santarém; 4 – Setúbal; 5 – Beja; 6 – Faro; 7 – Évora; 8 – Portalegre; 9 – Castelo Branco; 10 – Guarda; 11 – Coimbra; 12 – Aveiro; 13 – Viseu; 14 – Bragança; 15 – Vila Real; 16 – Porto; 17 – Braga; 18 – Viana do Castelo

Source: Litwińska, 2006

In 2007 the natural increase was negative, a situation that was recorded in 1918, due to pneumonic flu, while the pace of population growth has slowed down, and immigration flows remain its important component.

Table 2. Portugal. Demographic data

	1991	2001	2007
Population	9,967,800	10,293,000	10,608,000
Births	116,286	112,774	102,492
Natural increase	12,404	7,682	-1,020
Net migration	-20,219	65,000	19,500
Fertility rate	1.56	1.46	1.33
Average age of women on the birth of their 1 st child	24.9	26.8	28.2

Source: Carrilho, Patricio, 2003, 2007

The number of new marriages is tending to fall and the number of divorces is showing an upward trend. The average age of both men and women at the time of their first marriage has increased and the average age of women on the birth of their first child has also risen. The population is ageing progressively as a result of a fall in birth and an increase in longevity (Carilho, Patricio, 2003, 2007; Maślanka, 2007).

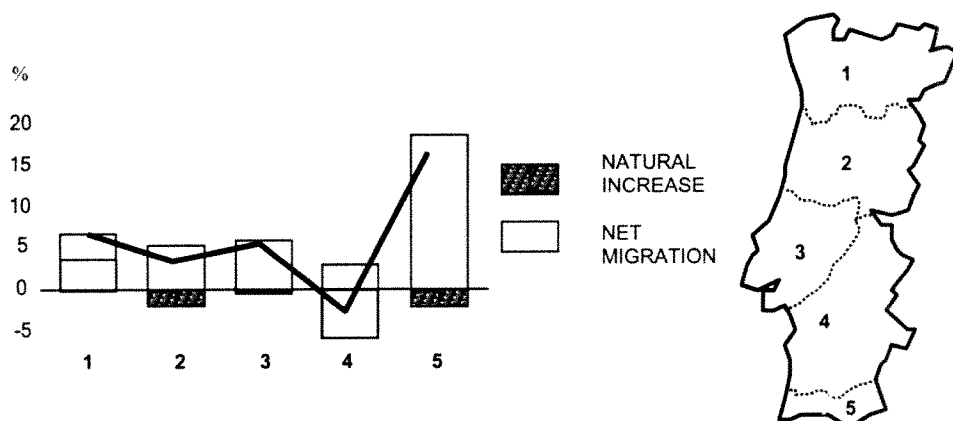


Fig. 4. The percentage of population growth of Portuguese regions in the period 1991–2001

Explanation: 1 – Norte; 2 – Centro; 3 – Lisboa e Vale do Tejo; 4 – Alentejo; 5 – Algarve

Source: www.ine.pt

In the recent past the population has increased only thanks to the influx of migrants. Most immigrants are from former Portuguese colonies and Soviet republics. There is a growing population of retirees from the United Kingdom.

Data for regions confirm this (Fig. 4). For the years 1991–2001 net migration had a decisive impact on the growth of population in regions. The decrease in population occurred only in Alentejo, where migration failed to offset the negative population growth. It is worth noting that the tourist region Algarve attracts new residents. Only in Norte, where the population is the most religious, was the natural increase positive.

Unfortunately there is a lack of migration data for urban and non-urban populations separately.

Dynamics of demographic processes in Portugal are well presented by the change in population of municipalities. In the period 1991–2001 population growth occurred in metropolitan areas of Lisbon and Porto, although both Lisbon and Porto showed a decrease. In addition, increments are recorded along the west coast (from Lisbon to the border with Spain), in Algarve, and in a few municipalities of the central and eastern part of Portugal. The highest increases range from 20% to 51%. Municipalities bordering Spain record falls from 12% to 19% (Atlas de Portugal, 2008).

It appears that areas with the highest dynamics of urbanization are situated in the municipalities which have the largest population increase (Fig. 5).

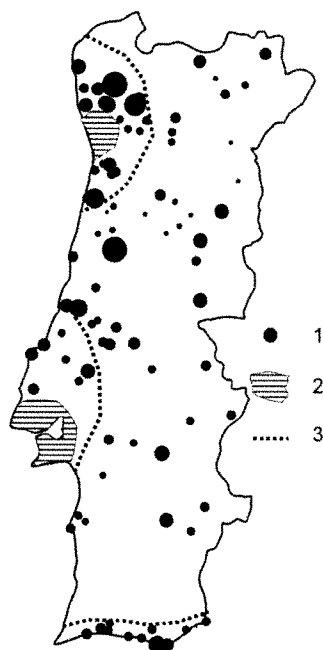


Fig. 5. Areas of the largest dynamics of urbanization
Explanation: 1 – towns/centres of urban areas; 2 – metropolitan areas of Lisbon and Porto; 3 – border of the highest dynamics of urbanization

Source: www.aml.pt

The decrease in the number of inhabitants in municipalities is caused by attracting population by the fastest developing urban centres and the smaller role of agriculture. Towns and cities being in the sphere of influence of Lisbon and Porto and situated in the tourist region of Algarve have the biggest chance to develop.

Service industry employment is related to the degree of urbanization. The structure of employment in Portugal reflects changes in the economy. While in the 1960s the percentage of employment in agriculture was 44%, in the secondary sector, 33% and in tertiary activities, 23% (Piskozub, 1976), in 2002 these indicators were equal: 11.8%, 30.7% and 57.5% (Instituto Nacional de Estatística).

The Portuguese urban system is characterized by the large number of small towns and two dominant cities, fast developing metropolitan areas of Lisbon and Porto, where the new form of urbanization can be observed. The example of Lisbon will be taken into consideration.

The Lisbon Metropolitan Area (LMA) was created via Law Decree 44/91 in 1991 (Alden, Pires da Rosa, 1996) and consists of 18 municipalities on both the north and south banks of the Tagus River. In this area 25% of Portugal's population lives, 32.7% of the national employment is located and the contribution for GDP surpasses 36% (Atlas da Area Metropolitana de Lisboa, 2005). In the LMA there can be observed a modern type of urbanization.

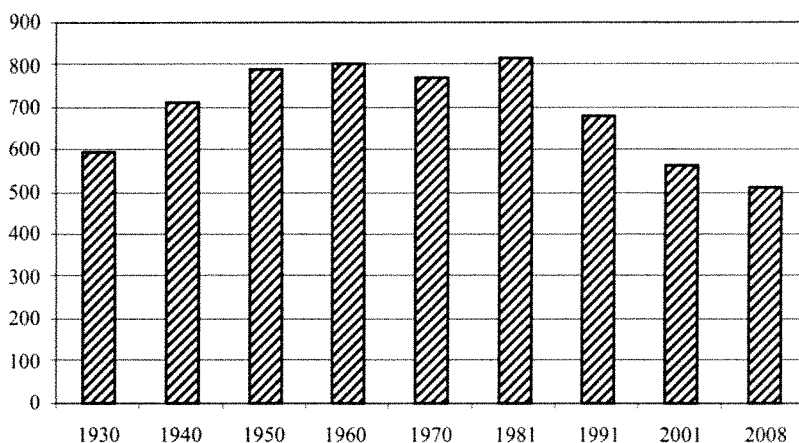


Fig. 6. The number of inhabitants of Lisbon (in thousands) in 1930–2008

Source: Developed by the author

Until the 1960s the population of Lisbon increased but then the number of inhabitants began a slow decline. Only in the mid-1970s did waves of refugees from the former Portuguese colonies cause growth (Fig. 6). In the decade of the 1980s the decrease was equal to 17%, in the 1990s, 15% and in the period 2001–2008, 9.5%.

In the Lisbon Metropolitan Area in the last decade of the 20th century a fall in population is also observed for Amadora by 3% and in the industrial Barreiro by 8%. In contrast, the largest increase was recorded in Sintra (situated to the West of Lisbon) by 39% and on the other side of the Tagus River in Seixal (by 29%), Sesimbra (by 38%) and Alcochete (by 28%) (Fig. 7). In these municipalities urban sprawl is mainly distributed along the roads. Lower prices of real estate have attracted new residents.

The image of the city is becoming an important factor to economic prospects and city competitiveness. Since the 1990s the conservation of urban heritage and gentrification of attractive inner-city neighbourhoods has become a priority, also in Lisbon. But it has become cheaper for people to buy a house in the periphery because land and property prices in the city centre are increasing. On the other hand very low rents have not allowed landlords to restore properties. The result is an increasingly elderly population and a concentration of ethnic minority populations in central areas, which could create problems in the future.

A good example of a public intervention was the decision to organize the exhibition Expo'98 and then creating the Park of Nations, a high quality, residential and office area in the eastern part of Lisbon. The concept of a modern infrastructure promoted by the Expo'98 exhibition with national and international

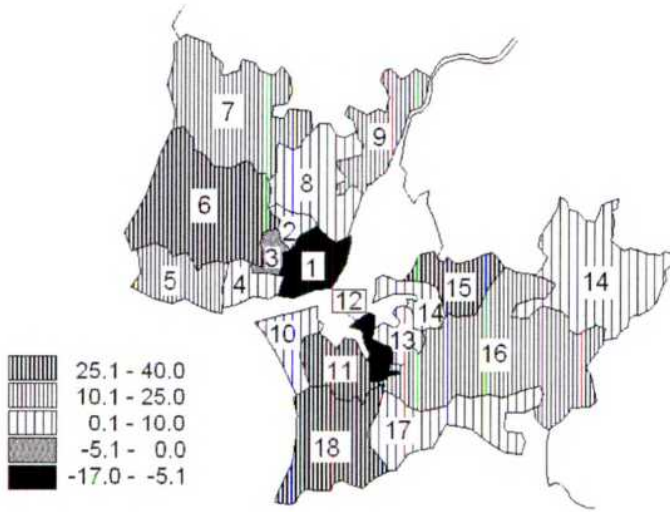


Fig. 7. The change of population (%) in the Lisbon Metropolitan Area in 1991–2001

Explanation: 1 – Lisbon; 2 – Odivelas; 3 – Amadora; 4 – Oeiras; 5 – Cascais; 6 – Sintra; 7 – Mafra; 8 – Loures; 9 – V. Franca da Xira; 10 – Almada; 11 – Seixal; 12 – Barreiro; 13 – Moita; 14 – Montijo; 15 – Alcochete; 16 – Palmela; 17 – Setubal; 18 – Sesimbra

Source: www.aml.pt

prestige was seen as the driving force for the rehabilitation of a disused part of the port area and the closure of hazardous, polluted and environmentally dangerous industrial installations. The investments in the road system and the construction of Vasco da Gama Bridge linking the north and south banks of the Tagus River have created conditions for accelerating the urban processes in municipalities situated in the eastern part of the Setubal Peninsula.

CONCLUSION

The lack of statistical data for towns and cities (data are recorded by municipalities) makes it difficult to analyze all phenomena linked with urbanization.

The phenomenon of urban sprawl is even more difficult to trace. Only analysis of maps and aerial photographs in subsequent periods could determine ‘sprawling’ built-up areas, the areas potentially suitable for being converted into urban areas.

Non-spatial mobility connected with urban processes requires sociological examinations.

However, even incomplete data show that in Portugal the pattern of urbanization is similar to the phenomenon that originated in the USA.

Demographic trends occurring in Europe and in Portugal show that if negative population growth is not balanced by migration, economic and social development will be threatened in the future.

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IMAGES OF THE URBAN SPACES OF CIESZYN

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ABSTRACT. A number of specific characteristics of the town of Cieszyn are inherently related to its history. Since 1920, Cieszyn has been divided by a state border along the Olza river (except for the war time of 1938–1945). Before that, since the 17th century, the town was part of the Austrian Habsburg empire and was under imperial Vienna's cultural influence. The contemporary structure of the Polish part of Cieszyn includes numerous elements reflecting the town's specificity. Therefore, the social cognitive image of Cieszyn comprises those components of its spatial structure too.

KEY WORDS: Poland, Cieszyn, perception, cognitive image, urban space.

INTRODUCTION: THE TOWN'S SPECIFIC FEATURES

In the late 13th century, the Duchy of Teschen became the fief of the Czech king and remained part of the Czech landholding until 1620 when the country collapsed and became dependent on the Habsburgs. The Duchy of Teschen was ruled by the Polish Piast dynasty until 1653. After the death of the last duchess in the line, Elisabeth Lucrezia, the land was incorporated as a fief into St. Wenceslaus' Crown (Czech kings) and the Austrian Habsburg empire until the dissolution of Austria-Hungary in 1918. As a result of an interim division of Cieszyn Silesia between the emerging new states of Czechoslovakia and Poland, the town of Cieszyn was under Polish control until July 1920 (after Czechoslovak troops had occupied it for a short time early in 1919). On 28th July 1920, a Conference of Ambassadors delineated the border between Poland and Czechoslovakia along the Olza river. The town of Cieszyn was then divided into two national parts. Taking advantage of Czechoslovakia's difficult political situation, on 1st October 1938 Poland entered the Czech part of Cieszyn and the region of Zaolzie. History took another turn when after Nazi Germany's occupation of Poland, the poviats

(administrative region of the 2nd order) of Bielsko and Cieszyn as well as the Silesian Zaolzie region were incorporated into the Third Reich. Following the end of WWII in Europe in 1945, the initial border between Poland and Czechoslovakia was re-established and the town was again divided between Cieszyn (Poland) and Český Těšín. Therefore Cieszyn and Tešín formed a single town only in the first half of the 20th century (since 1920 and in 1938–1945). The majority of that century witnessed two different towns separated by a sealed-off state border along the Olza river. Following the town's division, in the late 1920s the authorities of Český Těšín decided to build a new town hall, while the Polish authorities expanded the railway station from a small stop at Bobrówka.

The contemporary specificity of Cieszyn and its spatial structure have been largely affected by the town's border location (since 1920), as well as its former attachment to the Austrian Habsburg empire (since the 17th century). This was reflected in the town's architecture: e.g., Habsburgs' hunting lodge on the Castle Hill, the construction of a ducal brewery in 1846 or a tram line leading from the railway station to the town centre in 1911, an innovation modelled on Vienna. In the second half of the 19th century, many social and cultural organizations emerged in the town for the benefit of maintaining the Polish character of the former Duchy of Teschen (e.g., the Polish Educational Society, construction of a theatre in 1910). The Castle Hill bears traces of a town from around the 10th century, while an important historic Romanesque church – St. Nicholas' Rotunda (11th century) – has survived until today.

It should also be noted that following an agreement about good neighbourliness and friendly cooperation between Poland and Czecho-Slovakia in October 1991, many barriers to cross-border traffic were lifted, resulting in an explosive growth in cross-border movement followed in turn by the establishment of numerous contacts between the local governments on both sides of the border. Later on, when Czecho-Slovakia was dissolved, Poland and the Czech Republic entered into another cross-border cooperation agreement in September 1994. The border between Poland and the Czech Republic changed its permeability and transformed from a filtering border into an open one as a result of both countries' accession to the European Union in May 2004, and the introduction of the Schengen Agreement in December 2007.

A CONCEPTUAL MODEL OF THE TOWN'S COGNITIVE IMAGE

The town's unique position in the settlement system is reflected in its spatial representations and significant events which should be interpreted as symbolic of the entire town as well as magical from the point of view of its dwellers (see Libura,

1990; Bierwiazek, 2008). A behavioural attitude is one of research movements focusing on places and facilities meaningful to municipal space, pursued also in geography. As part of this movement, a research has been launched to examine the decision-making process among individuals and groups. The same holds true for factors affecting human cognitive and behavioural processes in the spatial context, in the midst of their own universes of perception. However, it should be noticed that some geographers resort to the term 'perception' in such an imprecise way because they refer to complex facilities too large to be perceived by means of stimuli directly affecting senses (see Walmsley, Lewis, 1984). In geographic research, perception is understood as a broad process of collecting, ordering and organizing information. It is sometimes identified with the processes of cognition and evaluation of town space (see Lisowski, 2007). Fig. 1 presents a conceptual model of learning urban space in relation to other elements of this space that rests on the works by Downs (1970), Pocock (1974) and Lloyd (1976).

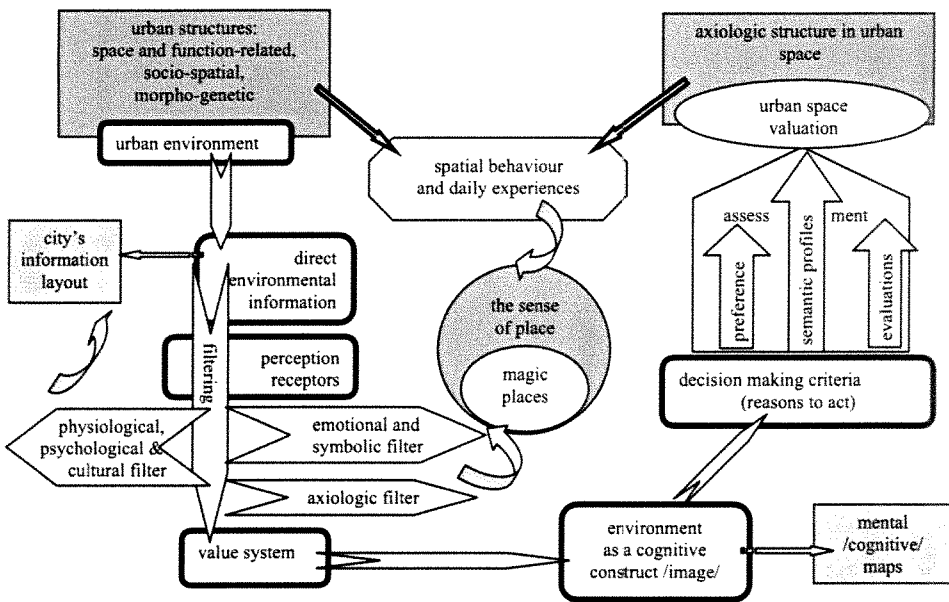


Fig. 1. Conceptual model of learning urban space

Source: Compiled on the basis of Downs (1970), Lloyd (1976) and Pocock (1974)

The city environment is a source of abundant direct information received and processed by two human filters: receptors and senses as well as every human being's value system. It is worth noting that a user moving along streets and across squares perceives the town as an inexhaustible multitude of visual landscapes as

well as many information layers fashioning the dweller's aesthetic and semantic values. In order to describe the information layers of the town environment perceived in its many aspects, notions like urban information layout, urban semiotic structure or semiotic landscape are used (see Wallis, 1979; Castells, 1982; Jałowiecki, Łukowski, 2008). The very process of filtering information depends on individual personal traits (a physiological and psychological filter) as well as on the attitude towards specific facilities (an emotional filter) or the value system employed (an axiological filter). The products of perception are often referred to by geographers as presentations; psychologists call them cognitive constructs. The effects of this cognitive and behavioural process are presented as the so-called mental maps and evaluation of town space (see Słodczyk, 1984).

CIESZYN AS IMAGINED BY SOCIAL RESPONDENTS

In empirical terms, the goal of this study is to analyze the presentations of Cieszyn based on completed questionnaires. Surveys of the perception and presentation of the town and its dwellers were conducted in June and July 2009, using two similar, though not identical, questionnaire forms. The June survey was conducted on a sample of 274 insiders, including 139 females and 135 males, while the July one involved 53 insiders and 57 outsiders. In the latter research, the insider type of respondents – Cieszyn residents – were treated as control. In selecting respondents use was made of the number-at-random method, which is typical of this kind of survey (cf. Downs, 1970; Libura, 1988; Bartnicka, 1989). The research was conducted in several designated places in the centre (downtown) and the intermediate zone of Cieszyn (e.g., near the bazaar in Katowicka Street and on the Liburnia housing estate). The analysis focused exclusively on survey issues related to the town's characteristics under study. Among Cieszyn's most characteristic places and buildings, the respondents indicated its oldest part as well as the Wolności and Przyjaźni bridges connecting Cieszyn and Český Těšín for pedestrians and cars (cf. Table 1a). One should note the fact that some respondents indicated the Castle Hill as a whole while others indicated specific buildings which are integral parts of the hill: St. Nicholas' Rotunda and the Silesian Castle of Art and Entrepreneurship. The same holds true for referring to the town hall, a significant element in the composition of the Cieszyn market square.

The results of the research conducted in July 2009 were slightly different owing to the questionnaire being extended to include important events taking place in Cieszyn (cf. Table 1b). Five places and only three events were indicated by the biggest number of respondents. Nonetheless, the Three Brothers Celebration organized on an annual basis in June to commemorate the founding of the town

Table 1. Cieszyn: significant places and events

a) June 2009		b) July 2009			
Characteristic places and buildings	in % (N=880)	Characteristic places, buildings and events	in % (N=481)	Magic places	in % (N=347)
The market square	15.5	The Three Brothers Celebration	14.3	The market square	17.3
The Castle Hill	10.9	St. Nicholas' Rotunda	9.1	The Castle Hill	12.7
St. Nicholas' Rotunda	8.9	The market square	7.7	The Peace Park	11.0
The Well of Three Brothers	7.7	The Well of Three Brothers	7.1	The Municipal Woods	10.1
Głęboka Street	5.5	The Piast Tower	6.7	Cieszyn Venice	6.6
The town hall	4.3	The Silesian Castle of Art and Entrepreneurship	5.8	Głęboka Street	6.3
Wolności and Przyjaźni bridges	4.0	Film festival 'On the border'	5.4	The Olza River Boulevard	5.2
The Silesian Castle of Art and Entrepreneurship	3.1	Film festival 'Holiday Film Frames'	4.2	Reger's Park	3.7
Other	40.1	Other	39.7	Other	27.1

Source: Authors' own development on the basis of questionnaires completed in June and July 2009

was indicated most frequently (14.3%). An analysis of the responses with respect to buildings and places indicates that Cieszyn's historic centre was the most popular, just like in the survey conducted a month before (June 2009). However, the difference was that specific components of the Castle Hill were indicated rather than the Hill as a whole. The respondents listed the rotunda and the castle as well as the 14th century Piast Tower with a new vantage terrace.

On top of that, the research revealed that the buildings and places indicated as the most characteristic of Cieszyn (mostly historic buildings) are not always magic

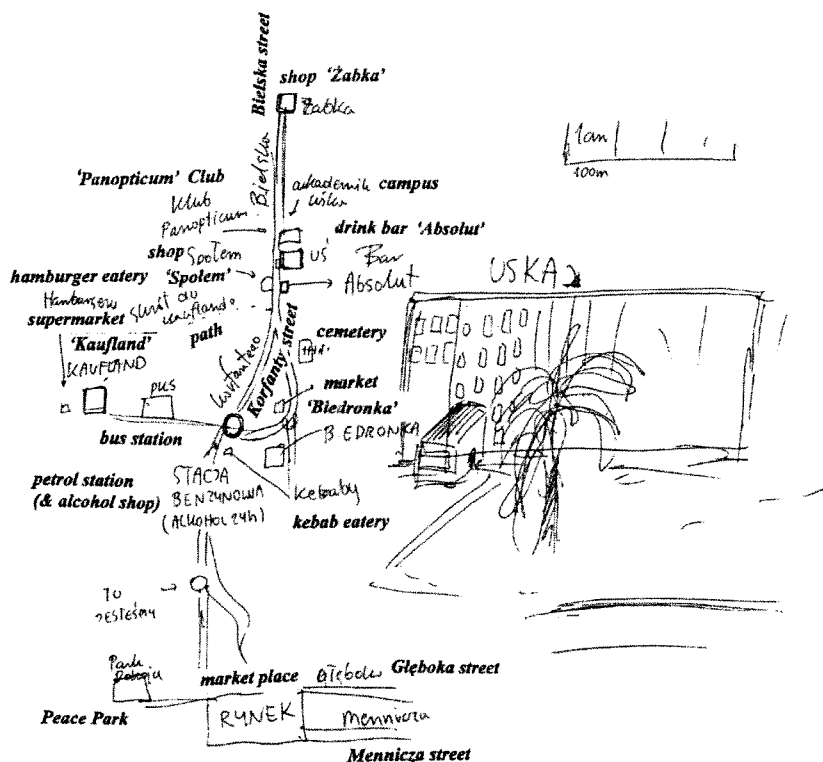


Fig. 2. Mental map produced by a respondent: an individual look at the town's structure
Explanation: 'Kaufland' – supermarket; 'Spółem' – shop; 'Żabka' – shop; 'Biedronka' – market; klub 'Panopticum' – 'Panopticum' Club; bar 'Absolut' – drink bar 'Absolut'; hamburgery – hamburger eatery; kebaby – kebab eatery; PKS – bus station; stacja benzynowa (alkohol 24h) – petrol station (& alcohol shop); miasteczko studenckie – campus; cmentarz – cemetery; Rynek – Market Place (old market); Park Pokoju – Peace Park; Bielska – Bielska street; Korfantego – Korfanty street; skrót do 'Kauflandu' – path to 'Kaufland'; Głęboka – Głęboka street; Mennicza – Mennicza street; tu jesteście – there we are here

Source: Questionnaires completed in June 2009

places (cf. Table 1b). It was proved that the most frequently indicated facilities included those with a high proportion of greenery tailored to the land use pattern, namely the Castle Hill, the Peace Park, the Municipal Woods, Cieszyn Venice, the boulevard along the Olza river, and Reger's Park. Therefore, characteristic facilities and places are not the same as spaces perceived as magical, although it would seem that in medium-sized towns they are identical. Information about the perceived facilities in Cieszyn's space was obtained verbally (answers to questions) and graphically (icons). Fig. 2 presents this graphic image of Cieszyn sketched as a 'mental map'. It is a diagram produced by a respondent living on the campus of the local branch of the University of Silesia. On this mental map, facilities important to its special structure include shops, restaurants, cafes, and the like.

Next to Cieszyn's spatial presentation, the research dealt with the town's functional properties as viewed by the public. The research results suggest that the single most important property is its role of a border town (91.8% indications), the role of the capital of Cieszyn Silesia (79.1%), and the position of a town with a multitude of historic buildings (66.4%) (see Fig. 3). It is interesting to

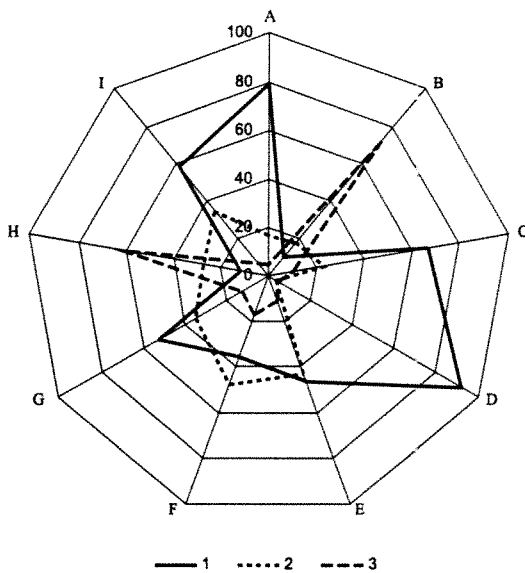


Fig. 3. Social appraisal of Cieszyn's characteristics (N=110)

Explanation: A – capital of Cieszyn Silesia; B – suburban town; C – historic town; D – border town; E – tourist town; F – education centre; G – trade town; H – industrial town; I – capital of county; 1 – most important; 2 – moderately important; 3 – least important

Source: Authors' own presentation on the basis of questionnaires completed in July 2009

note that the respondents were most sensitive about their town's historical and administrative functions. The trade function, so characteristic of border cities, barely ranked as the fifth (out of nine) most important descriptors of the town (52.7% of indications).

According to respondents, the least important function of Cieszyn is that of a suburban town (71.8%) which would otherwise degrade it as a cultural and leisure centre. The fact that the town's industrial nature was regarded unimportant (60.9% of indications) is strictly related to the bankruptcies, limited business activity and significant staff reductions in the town's numerous production works. Perceiving the town as a centre of education proved moderately significant (47.3%).

The town's borderland location is indirectly related to Cieszyn's territorial continuity perceived in the context of the increasingly blurred state border. Therefore respondents were asked if Cieszyn dwellers treated Český Těšín as an extension or a fragment of their town. Opinions varied, but 58.0% of respondents still perceived the town as a whole. The research conducted by Bierwiazzonek (2008) also reflected the diversified perceptions of Cieszyn. Some respondents treated the borderland urban complex as two separate systems separated by a state border since 1920. This perception has already been deeply rooted in social awareness. Others treated the two separate parts of the town (Polish and Czech) as a single urban system. One respondent said: 'When speaking about Cieszyn one needs to bear in mind the other side (of the border). To me it is a single city. Also, people from Český Těšín perceive the town as a whole. Czechs recognize that the historical centre is located on the Polish side, while the Czech part of the town hosts more cultural events. Český Těšín is perceived as a place for shopping and travelling (the trip to Prague is less expensive on the Czech side)' (Bierwiazzonek, 2008: 110). On the other hand, the differences in opinions on the durability of the division along the Olza river are certainly largely affected by the town's historic past in the 20th century, the records of the Zaolzie region conflict as well as contemporary disputes (e.g., after restoring a monument to the Silesian Legionaries there was a conflict around the so-called 'Silesian woman' with a sabre or about celebrating the town's foundation anniversaries).

The image of Cieszyn's social inequality and the sense of safety in its various parts are important elements typical of the town's spatial diversification. Respondents decided that Cieszyn's most dangerous parts included tower-block housing estates (Piastowskie, Liburnia) and the old district (centre). This leads to a simple conclusion that the districts perceived as the poorest are frequently regarded dangerous (see Table 2). What is surprising, however, is the inclusion of Cieszyn Venice in the list of the poorest and most dangerous places, also perceived by the respondents as a magic place.

A town consists of space as well as inhabitants. This is why respondents were requested to identify the inhabitants' characteristics within five semantic profiles on a scale of 1–5 (Fig. 4). The research relied on the semantic differential, a special method of quantitative evaluation of the impression made by buildings

Table 2. The town's dangerous and poorest districts (in %)

The town's poorest districts (N=363)		The town's dangerous districts (N=332)	
Sikorskiego Street	10.5	Piastowskie estate	13.9
City centre	9.6	Liburnia estate	8.4
New Town	9.1	City centre	7.2
Piastowskie estate	8.3	New Town	5.4
Błogocka Street	6.6	Sikorskiego Street	4.5
Cieszyn Venice	6.1	Vicinity of open markets	4.2
ZOR Estate	5.0	Błogocka Street	3.3
Przykopa Street	4.1	Cieszyn Venice	2.5
No such districts	5.2	No such districts	15.7
Other	35.5	Other	34.9

Source: Authors' own development on the basis of questionnaires completed in June 2009

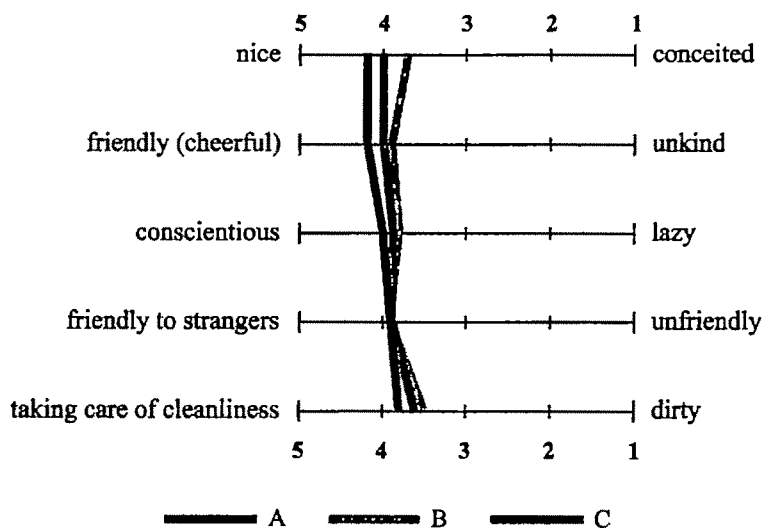


Fig. 4. Profile of a Cieszyn resident

Explanation: A – opinions of respondents – Cieszyn inhabitants (N=53);
 B – opinions of respondents – residents of other locations (N=57); C – total
 opinions of respondents (N=110)

Source: Authors' own presentation on the basis of questionnaires completed in July 2009

or properties on the individual surveyed (see Burgess, 1978; Mayntz et al., 1985). The analysis included five pairs of opposing properties referring to the features of Cieszyn residents. When the results were processed, each pair of opposing features was treated as a continuum consisting of five elements (from 5 – strong positive indication, to 1 – strong negative indication). Later on graphic profiles there were determined with respect to average evaluations; the profiles represent the differences in the respondents' perception of Cieszyn inhabitants. The analysis was conducted in three 'layers': (a) opinions of respondents living in Cieszyn; (b) opinions of respondents living elsewhere; and (c) total opinions of respondents.

It was proved that the respondents evaluated themselves better (average evaluation of 4.0). Respondents living outside of Cieszyn had a less favourable opinion of the town dwellers (average evaluation of 3.8). The properties of 'being nice' and 'friendly' were rated highest with an average evaluation of 4.0 each, while 'taking care of cleanliness' was rated lowest (an average of 3.6). These interdependencies are presented by means of graphic profiles; they clearly indicate that the biggest differences in evaluating Cieszyn residents relate to the 'friendly – unkind' opposition. The respondents who were at the same time Cieszyn dwellers rated this quality at 4.2, while those from other locations were moderately positive about this feature (3.7 on average). It is also worth noting that Cieszyn residents were positive about as many as three properties, while respondents from other locations were only moderately positive about all five features. There was no single case of respondents having no opinion at all or having a downright negative opinion. This stems from the fact that the analysis relied on averaged opinions. Therefore the survey of properties of Cieszyn residents resulted in a profile of an inhabitant who is predominantly nice (39.1% indications) and friendly (38.2%).

CONCLUSION

According to public opinion Cieszyn is primarily a border town and a centre uniting the sub-region of Cieszyn Silesia. Despite its location, the town is losing some of its characteristic borderland traits as a result of integration processes (as part of the European Union and the Schengen Agreement). Hence the growing popularity of the opinion that Cieszyn and Český Těšín are spatially and functionally continuous. It is also worth noting that in the light of responses of Cieszyn residents (insiders), the frontier Olza river is not treated as its margin, while the bridges joining the two towns and the linear systems (streets) leading to them (Głęboka Street or the Olza boulevard, i.e., Łysek Avenue), are significant elements of the mental spatial structure of the town.

On the other hand, the spatial representations of Cieszyn are largely affected by certain characteristic (symbolic) buildings and magic places which may come in handy especially in promoting the town among tourists, e.g., the Castle Hill with its St. Nicholas' Rotunda and the Piast Tower, or Cieszyn Venice, and the Market Square with a growing network of eating facilities.

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ELECTORAL GEOGRAPHY AS A NEW MEAN OF ANALYZING SOCIAL CHANGE. KRAKÓW CITY AND MAŁOPOLSKIE VOIVODSHIP CASE STUDY

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ABSTRACT. The paper describes political support for Polish political parties as aggregated into four principal options (left-wing, liberal, populist, and right-wing) as well as flux in the electorate in Małopolskie voivodship in the last two decades in order to show regions of electoral stability that tend to do favour the four principal social and political options. Stabilization of cultural and political identity and gradual changes therein are shown by comparing dominant political options with selected social and economic data. The comparison should also allow for a reasonable prediction of future gains and losses for each political option.

KEY WORDS: Poland, Małopolskie voivodship, Kraków, electoral geography, political preferences.

INTRODUCTION

Electoral geography is a new field that has emerged over the last two decades in social and demographic research in Poland. It is the product of the democratization of public life in Poland and elsewhere in Central and Eastern Europe. Electoral geography is not merely a fascinating new discipline with great analytical potential but also a practical solution rooted in systematic databases. The fundamental research goal of the discipline of electoral geography is to study electoral behaviour driven by a variety of social attitudes. The most important of electoral behaviours are gauged via rates of voter turnout and electoral preferences as manifested in public support for different electoral committees.

The territory currently part of Małopolskie voivodship has not seen any significant population shifts in its most recent history. The region had not changed

hands either, politically speaking, as had been the case with areas in western Poland following World War II. Today, the 'residency index' for Małopolskie voivodship is rather high, which translates into a general tendency of stable voting patterns. The conservative and populist ideologies of the pre-World War I era (contemporary territory of the Małopolskie voivodship as the part of Austrian province of Galicia) were tinged with nationalist undertones and put Małopolskie voivodship squarely to the right of centre during the era of the Second Polish Republic (prior to World War II).

The northern part of the voivodship, however, had been part of the Russian Partition prior to World War I. This particular area was strongly influenced by populist political parties up until World War II. Today, Małopolskie voivodship stands out nationally in terms of its tendency to favour a variety of political affiliations, which can be broadly considered right-wing. This state of affairs is a logical consequence of the influence of social structures and attitudes that can be best described as 'conservative'.

The paper presents the electoral preferences of the citizens of the Małopolskie voivodship based on Sejm (lower house of the Polish Parliament) election results from 1993–2007. The election results are then analyzed with respect to selected social and economic characteristics in order to show potential political trends, which may take hold in the near or distant future in Małopolskie voivodship society.

The paper takes into account all major electoral committees (political parties). The results of data analysis are presented on a gmina (administrative region of the 3rd order). The electoral committees analyzed in the paper are listed in Table 1. The committees have been placed in four groups of major political, social, and economic orientations: 1) left-wing, 2) liberal, 3) populist, and 4) right-wing. This classification system applies to the Polish political scene since the early 1990s due to an incomplete separation of the left and the right. This typology is normally accepted in the geographic sciences (Kowalski, 2003, 2004) and in the humanities (Żukowski, 1993; Zarycki, 1997). The system is based on two independent pairs of values – social conservatism and cultural liberalism as well as free market beliefs and socialist beliefs (Kitschelt, 1992; Kabath, Sobczak, 1999).

The classification system presented above can be debatable and is not the only means of grouping the political parties of interest. Nevertheless, most mathematical methods show that this system reflects actual differences between political viewpoints (Kabath, Parysek, 2002). Some parties present very specific platforms and are easy to classify. On the other hand, other parties involve multiple orientations and tend to evolve on the Polish political scene. Parties of this type had to be classified on the basis of common social perceptions of the parties in question rather than specific electoral platforms. It is also important

Table 1. Selected political parties classified based on four major orientations

Year	Left-wing	Liberal
1993	Democratic Left Alliance (DLA) Union of Labour (UL)	Democratic Union (DU) Liberal-Democratic Congress (LDC)
1997	Democratic Left Alliance (DLA) Union of Labour (UL)	Freedom Union (FU)
2001	Coalition Democratic Left Alliance – Union of Labour (DLA-UL)	Freedom Union (FU) Voters' Civic Platform (CP)
2005	Democratic Party – demokraci.pl (DP) Polish Social Democracy (PSD) Democratic Left Alliance (DLA)	Civic Platform (CP)
2007	Coalition the Left and the Democrats Populist	Civic Platform (CP) Right-wing
1993	Polish Peasant Party (PPP) Polish Peasant Party – Popular Alliance (PPP-PA)	Catholic Coalition 'Fatherland' (CCF) Confederation for an Independent Poland (CIP) Solidarity Centrist Alliance (CA) Real Politics Union (RPU) Coalition for the Republic of Poland (CRP)
1997	Polish Peasant Party (PPP)	Solidarity Electoral Action (SEA) The Movement for the Reconstruction of Poland (RPM) Right-wing Union of Poland (RWUP) Bloc for Poland (BP)
2001	Self-Defense of the Republic of Poland (SDRP) Polish Peasant Party (PPP)	Coalition Solidarity of the Right-wing Electoral Action (SREA) Law and Justice (LJ) League of Polish Families (LPF)
2005	Polish Peasant Party (PPP) Self-Defense of the Republic of Poland (SDRP)	Patriotic Movement (PM) League of Polish Families (LPF) Law and Justice (LJ) Homeland Party (HP)
2007	Polish Peasant Party (PPP) Self-Defense of the Republic of Poland (SDRP)	League of Polish Families (LPF) Law and Justice (LJ)

Source: Author's work based on NEC data

to note that the terms 'left-wing' and 'right-wing' do not have an unequivocal meaning. Both terms can be interpreted in a number of ways, especially with respect to social and cultural issues as well as strictly economic ones. This problem is discussed in detail by T. Zarycki (2002) both in the context of Poland and Europe as a whole.

A good example of this type of dualism is the difference between the Law and Justice Party and the Real Politics Party. Social perceptions of political parties were used to supplement the classification system presented earlier. The creation

of four groups of political parties goes beyond the traditional right-left model and enables a comprehensive view of the Polish political scene and the changes that have shaped it over the last two decades. For example, the populist movement and the union-oriented movement campaigning under the banner of Solidarity are two examples of parties that operate 'outside the box' (left-wing vs. right-wing). The populist movement has taken on a number of forms, while the Solidarity-labeled union movement can be considered liberal, especially with respect to non-economic issues. The classification system introduced earlier affords the luxury of ignoring fluctuations in political preferences among different political parties, given the fact that normally there are several parties that offer similar platforms. Voters tend to easily switch between the parties within the designated political orientations without having to change their fundamental social views.

Political committees in Poland have taken on many different roles based on on-going political needs, opportunities for collaboration, and other strategic issues identified during the course of each particular campaign. Political orientations, however, are a more stable concept which tends to evolve slower than individual political parties. It can, therefore, be assumed that there exists a need for a party from each of the four orientations identified, and the party labels are just fleeting responses to temporary social states of mind. It must be noted that many more electoral committees were registered during each parliamentary election than are discussed in this paper. The selection process can be rationalized in the following way. Committees with marginal rates of voter support (less than 1%) were not included in the paper. This made the analytical results easier to interpret and no less accurate. The Polish political scene is slowly beginning to consolidate with fewer and fewer political committees taking part in elections. On the one hand, this outcome was forced via changes in national election law, including the creation of electoral thresholds. On the other hand, the different pieces of the Polish political scene have begun to fall into place following the chaos that ensued the demise of the Communist system in 1989.

This explains why it has been so difficult to classify political parties taking part in elections in the 1990s. In some cases, especially the case of 1993, some parties with more than trace amounts of support had to be eliminated from the analytical process employed for this paper. This included the Nonparty Block to Support Reform (Polish acronym: BBWR; 7.57%) and the X Party (1.74%). Both entities possessed no specific ideology and were short-lived. It would be difficult to identify any party that could be called the successor of either of these two groups. Fig. 1, 2, 3, and 4 show electoral preferences for a number of committees grouped into four categories.

An additional advantage of this type of classification system and a 15-year time scale is the opportunity to disregard the flux of voters between different

political parties over time. This type of flux is the result of macro-social changes and does not occur uniformly on a national scale. It is not the purpose of this paper to compare public support levels for a single political party or a single political preference over time. On the other hand, permanent electoral trends can be used in electoral geography to attempt to predict social changes in the future. Fig. 1, 2, 3, and 4 indicate that the spatial relationships between different regions in Poland are quite stable regardless of national trends that affect public support levels for different political parties.

THE LEFT-WING OPTION

The Małopolskie voivodship is a region that traditionally does not favour left-wing parties, especially those rooted in Post-communist ideas. The Left enjoys support primarily in gminas located in the part of the Małopolskie voivodship that used to be a part of the former 19th century Russian Kingdom of Poland up until 1918. Today, this includes the poviats (administrative region of the 2nd order) of Olkusz and Miechów. Another area where the Left enjoys a significantly higher level of support is the eastern end of the Upper Silesian Metropolitan Area, which was part of the Upper Silesian Industrial District from 1975 to 1998. At that time, the area – Oświęcim poviat, Chrzanów poviat, Olkusz poviat – had enjoyed strong economic bonds with the aforementioned industrial district. In addition to receive support from voters in the northwestern part of the Małopolskie voivodship, the Left also does receive an appreciable level of voter support in Gorlice poviat and the town of Krynica-Zdrój with its vicinity in the southern part of the voivodship. The two southern poviats are, however, quite different from northwestern poviats in Małopolskie voivodship in terms of social and economic structures.

This is the only part of the Małopolskie voivodship that experienced partial depopulation and subsequent repopulation following the end of World War II. At the time, the town of Krynica-Zdrój was located on the western fringe of the Łemko Region – a culturally unique region stretching across the southern part of the poviat and towards the east of Poland. The tendency to support left-wing and liberal parties is a characteristic of most ethnic minorities and populations relatively new to a given geographic area. This tendency can be found in the southeastern part of the Małopolskie voivodship. The supremacy of urban areas over their surrounding rural areas can also be easily observed across the voivodship. This is especially true of large cities and midsize towns. Cities and towns such as Kraków, Tarnów, Nowy Sącz, Bochnia, and Zakopane tend to offer more support to left-wing candidates.

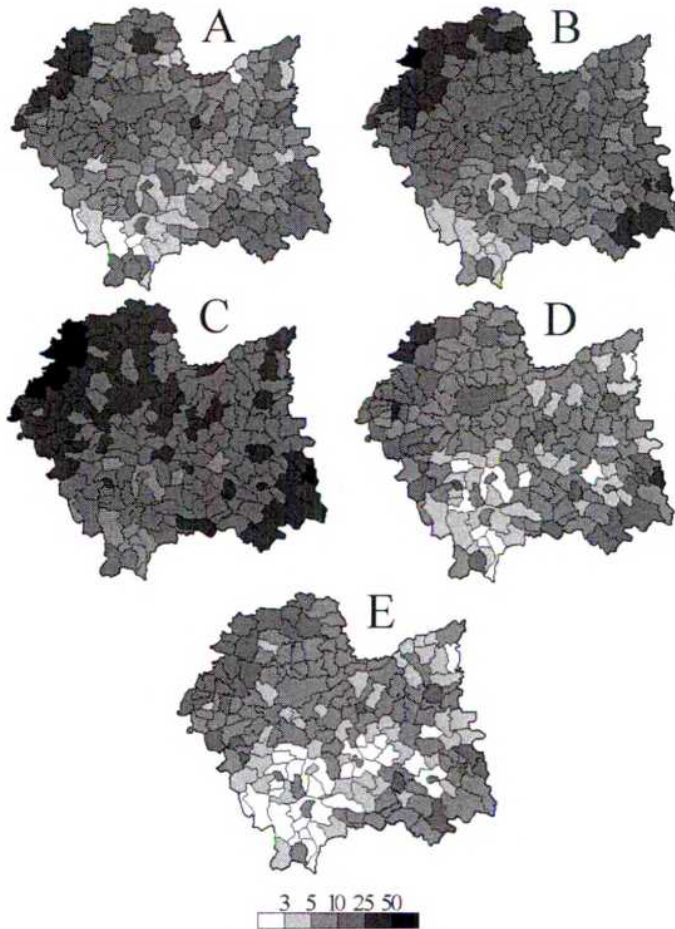


Fig. 1. Percentage of voters cast for left-wing parties by gminas

Explanation: (see Table 1) A – 1993 DLA-UL; B – 1997 DLA-UL; C – 2001 – DLA-UL; D – 2005 DLA-PSD-DP; E – 2007 The Left and the Democrats

Source: Author's work based on NEC data

THE LIBERAL OPTION

The name itself may not be the best, as this political orientation started out with individuals from the left-leaning Democratic Union as well as from some organizations that may be considered right-wing. In general, however, this group of political entities tends to connect best with non-economic issues, treating them in a rather liberal manner. Territorial analysis for the liberal option is more difficult than that for the left-wing option, whose main pillar of support

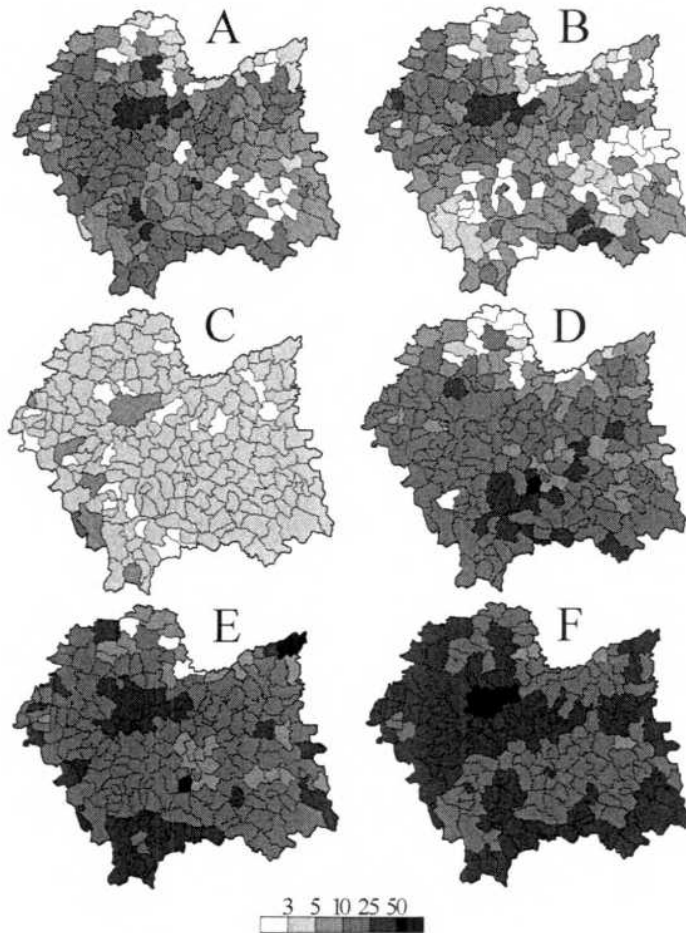


Fig. 2. Percentage of voters cast for liberal parties by gminas

Explanation: (see Table 1) A – 1993 DU-LDC; B – 1997 FU; C – 2001 FU; D – 2001 CP; E – 2005 CP; F – 2007 CP

Source: Author's work based on NEC data

throughout the period of research has been the Democratic Left Union. In the case of the liberal option, however, three different parties need to be considered: 1) Democratic Union, 2) Freedom Union and Liberal-Democratic Congress (both later), 3) Civic Platform (today). This is why voter support for the liberal option is not that easy to map.

A number of fundamental characteristics can, however, be discerned. The liberal electorate is first and foremost associated with large and midsize cities. The influence of the city of Kraków is yet another factor that needs to be

considered when analyzing its immediate vicinity, which is experiencing the process of suburbanization (Fig. 2, support for the Civic Platform in 2005). It is also worth noting that support levels for the liberal option tend to rise along the narrow Slovak border zone, where tourism is an important industry. There are two possible reasons for this: (a) local business growth tied to the tourist industry; (b) a host of sociological phenomena associated with tourist psychology and its impact on local communities. One explanation may be that traditional communities are becoming more liberal under the influence of ideas brought in by tourists (Zaręba, 2006).

This type of liberal social phenomenon can be observed in the following poviats: Krynica-Zdrój, Muszyna, Piwniczna-Zdrój, Szczawnica, Krościenko, and Zakopane. This notion has been partially discredited by territorial differences in support levels for the Democratic Union and its successors vs. support levels for the Civic Platform. Unlike the Democratic Union, the Civic Platform was initially viewed as a right-leaning party, which gained higher levels of support in 2001 in an area (Mszana Dolna, Limanowa) traditionally associated with the right-wing option. Finally, the Democratic Union has been largely rejected by the Catholic electorate and the conservative electorate, especially in 1997 in Grybów, Nowy Sącz, and Orawa.

The two options described above are not the dominant options in Małopolskie voivodship, which tends to be right-wing and traditional. Political entities connected with agrarian, populist, and regional traditions as well as conservative, Christian, and nationalist traditions constitute the principal political orientation of the western and central part of former Austrian province of Galicia. It should be noted that the right-wing option is dominant both in terms of territory and number of votes (see Table 2), while the number of votes cast for the populist movement does not exceed that cast for the liberal option. However, the populist option is dominant across large rural areas of the voivodship, which makes it important from a territorial point of view.

Table 2. Political support for selected options from 1993 to 2007 (in%)

	1	2	3	4
1993	18.3	17.7	17.4	33.9
1997	20.0	14.9	7.1	55.0
2001	30.1	20.4	17.8	31.4
2005	11.9	24.9	13.6	46.9
2007	8.7	38.3	8.7	42.8
mean	17.8	23.2	12.3	42.0

Explanation: 1 – left-wing; 2 – liberal; 3 – populist; 4 – right-wing

Source: Author's work based on NEC data

THE POPULIST OPTION

The populist option does not have a consistent platform. Prior to World War II and immediately following World War II, the populist movement was clearly dominated by non-leftist factions – ones that could even be said to resemble the nationalist-democratic movement. Today, however, the core of the populist movement (Polish Peasant Party) and the maverick Self-Defense of the Republic of Poland Party can be rather easily identified with the Left, especially with respect to economic issues. A unique region on the map of the Małopolskie voivodship – unique from a populist perspective – is its northern fringe, found outside the former Austrian administrative region of Galicia, along the border with Świętokrzyskie voivodship. Adjacent to this region are the Galician areas of northern Tarnów powiat and Dąbrowa Tarnowska powiat. This region tends to lean more to the left and tends to support the less conservative wing of the populist movement. This is especially true of Proszowice powiat, Miechów powiat, as well as parts of Olkusz powiat and Kraków powiat.

This is an area characterized by low rates of participation in religious services in relation to other rural areas in the voivodship. At the same time, this area offers a strong degree of support for the Self-Defense of the Republic of Poland Party, a party far removed from right-wing traditions. Another important area of support for the populist option is the central-eastern part of the voivodship, on the border of Tarnów powiat and Nowy Sącz powiat. In this area, support for the populist movement is primarily the result of conservative traditions. In 1993, it was this region where the conservative Polish Peasant Party – Popular Alliance gained its highest support. A populist electorate does not exist in Kraków and remains very small in other municipalities, especially larger cities. The populist option is slowly being driven out of the Kraków area. This is primarily the result of the migration of city residents into suburban areas, where a different type of lifestyle is taking root. The populist option is finding itself at the opposite end of the social and political spectrum from the liberal option, as seen in Fig. 2 and 3.

THE RIGHT-WING OPTION

The right-wing option is dominant on the political scene in the Małopolskie voivodship (Table 2 and Fig. 4). It is particularly strong in former Nowosądeckie voivodship (according to previous administrative division of Poland in 1975–1998), especially areas around Grybów and Nowy Sącz as well as Podhale and Orawa. The central part of Tarnów powiat also favours the right-wing option.

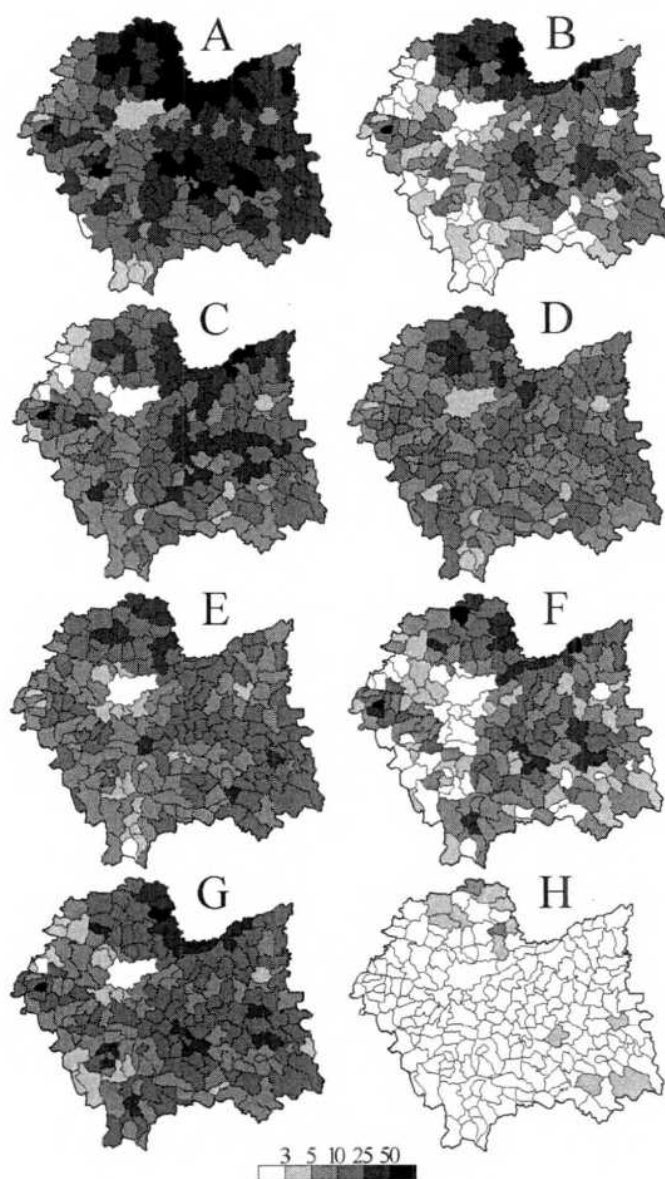


Fig. 3. Percentage of voters cast for populist parties by gminas

Explanation: (see Table 1) A – 1993 PPP-PPPPA; B – 1997 PPP; C – 2001 PPP; D – 2001 SDRP; E – 2005 SDRP; F – 2005 PPP; G – 2007 PPP; H – 2007 SDRP

Source: Author's work based on NEC data

Levels of support lower than in the surrounding areas are found in large cities such as Kraków and Tarnów. While the right-wing has been represented by a number of different political groups over the years, which explains its spatially fractured pattern of support, there is one geographic area that has consistently not offered appreciable support for the right-wing.

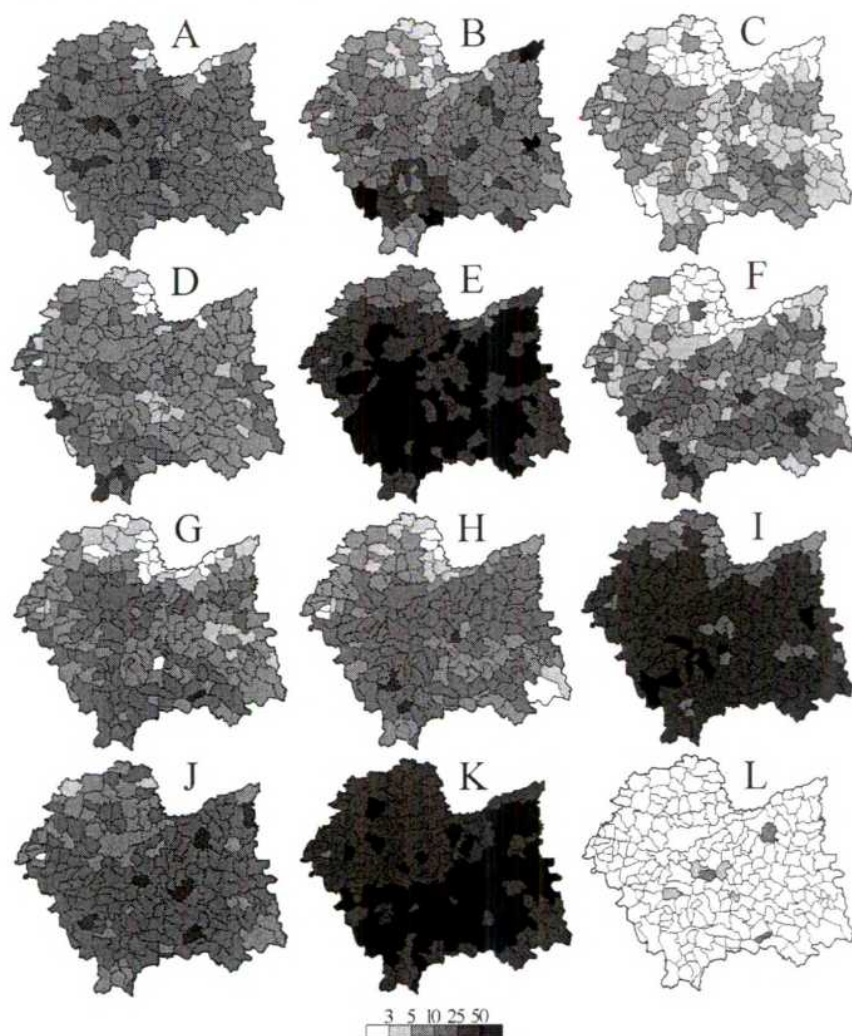


Fig. 4. Percentage of voters cast for right-wing parties by gminas

Explanation: (see Table 1) A – 1993 CA-CIP-CRP; B – 1993 CCF-RPU; C – 1993 Solidarity; D – 1997 RPM-RWUP-BP; E – 1997 SEA; F – 2001 SREA; G – 2001 LJ; H – 2001 LPF; I – 2005 LJ; J – 2005 LPF-PM-HP; K – 2007 LJ; L – 2007 LPF

Source: Author's work based on NEC data

This is true of the northern agricultural fringe of the voivodship, and to a lesser extent, the highly urbanized area of the eastern fringe of the Upper Silesian Industrial District between Bukowno, Olkusz and Kęty. Even in areas that offer strong support for the right-wing, it is possible to find little support for one right-wing party vs. another. Right-wing parties tend to draw support away from other right-wing parties in a number of areas in Małopolskie voivodship.

Phenomena of this type are interesting, as they show the different expectations that local communities have of the Right and their perceptions of it. A good example of this is Podtatrze (the Lower Tatra Region), which strongly leans to the right, however, offers consistently low rates of voter support for nationalist options. This is true of both the League of Polish Families as well as its predecessor, the Catholic Coalition 'Fatherland' Committee (1993).

ANALYSIS

Given the number of political parties for which election data has been analyzed for the 15-year period of interest, voter support has been aggregated into the main four political categories in order to show a more comprehensive view of the political landscape. Table 2 contains averages for each of the four political categories. Fig. 5 contains median rates of political support for each political option. Finally, the gminas that offered the highest and lowest rates of support – top 10% and bottom 10% – for each political option were identified (18 gminas). The information herein is designed to be presented in a comprehensive manner and does not factor in the issue of time, which can alter the proportion of support for a given political option.

The use of average values helps identify areas that always tend to support a particular political option (vs. voivodship's average), even if that particular option does not dominate the political scene at a given moment in time for macro-social reasons. An example of this would be support for unpopular right-wing parties in 2001. This was precisely the case with support for the Solidarity of the Right-wing Electoral Action Party in 2001 in the southern part of the voivodship. This was also the case with support for the left-wing – unpopular in 1997 and 2001 – in the northwest and the southeast of the voivodship.

Fig. 6 shows 72 gminas offering the greatest degree of political support – 18 gminas per political option. It must be noted that each area – except Libiąż gmina – is completely distinct. There is no evidence of political permeation from one area to another. The political map of the voivodship is largely determined by where voters live.

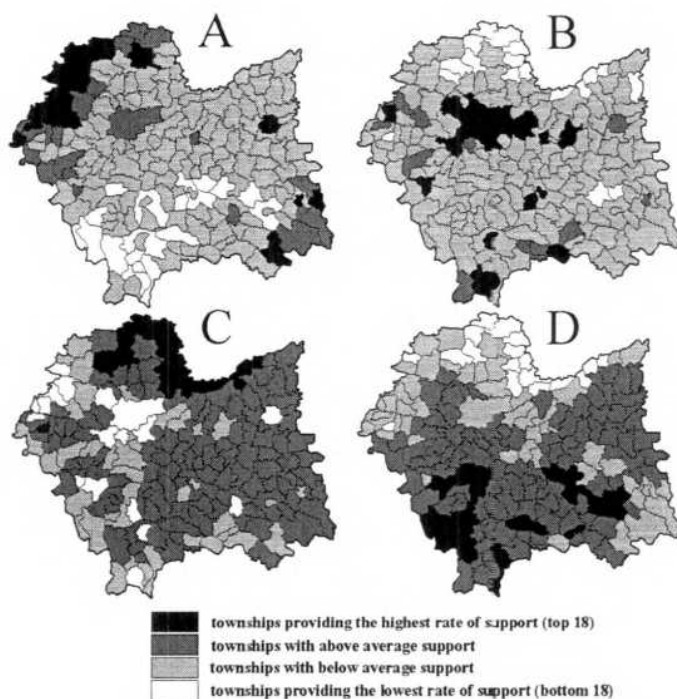


Fig. 5. Political map of Małopolskie voivodship

Explanation: A – left-wing option; B – liberal option; C – populist option;
D – right-wing option

Source: Author's work based on NEC data

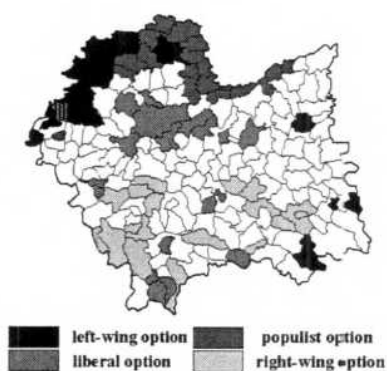


Fig. 6. Location of gminas that best represent each political option

Source: Author's work based on NEC data

It has been shown that there exists a correlation between the size of a city and the willingness of its residents to support the liberal or left-wing option. This is true to some extent even in strongly conservative and populist areas such as Tarnów powiat and the southern part of the voivodship. Areas economically linked to the Upper Silesian Metropolitan Area and strongly urbanized areas tend to lean towards the left-wing as well as the liberal option. This is especially true in towns (Libiąż). On the other hand, the northern fringe of the Left-wing Belt, which includes the urban-rural gminas of Wolbrom and Miechów, is characterized by a rural population largely engaged in agriculture. This area offers a strong degree of support to populist parties.

Only four left-wing gminas can be found outside of the 'left-wing zone' in Małopolskie voivodship. The other two are the urban-rural gmina of Krynica-Zdrój and the rural gmina of Lipinki. It is important to note that Tarnów also offers an above average level of support to the right-wing option and the liberal option. Hence, the left-wing's advantage is not that substantial. Tarnów is classified as a left-wing stronghold primarily because the number of left-wing gminas is so small.

The area that offers the most support to the liberal option is the city of Kraków as well as its suburban zone, which includes the towns of Zielonki, Zabierzów, Skawina, Wieliczka, Niepołomice, and Kłaj, as well as to a lesser extent, the town of Mogilany. The suburban zone features a large population of former Kraków residents and a strongly declining agricultural sector. Other areas that lean towards liberal politics are mainly towns such as Libiąż, Zakopane, Nowy Targ, Sucha Beskidzka, Szczawnica, Bochnia, Brzesko, Limanowa, and their immediate vicinity. Podtatrze is unique in terms of leaning towards liberal politics without having any affinity for the left-wing movement. The result is a neo-right-wing mindset with negligible conservative content.

The Civic Platform and the Real Politics Union enjoy higher rates of political support in Podtatrze than in adjacent regions. The opposite is true of other parties such as Law and Justice, League of Polish Families, and the Catholic Coalition 'Fatherland' Committee (1993). This may reflect the fact that the economy and the society of Zakopane and its vicinity is uniquely affected by the tourism industry and the employment structure associated with it. The same can be said of Szczawnica gmina, and to a lesser degree, Krościenko nad Dunajcem gmina and Czorsztyn gmina.

The geographic area leaning the most towards the populist option forms a distinct region, with the exception of three gminas in Tarnów powiat. The area was not linked administratively with Galicia and Kraków until World War II. The northern part of the region was administratively separate from Kraków once

again from 1975 to 1998. This area bears all of the historical characteristics of Świętokrzyskie voivodship. The parts of the region that lean towards populist parties do so when the populist party in question is more left-wing than conservative. It is important to note that the populist option enjoys support – to a lesser or greater extent – in most gminas in the central, eastern, and northern part of the voivodship, where its level of political support is above average.

The total rate of support for populist parties is relatively low as a result of lack of a populist electorate in major cities and midsize towns. This illustrates a substantial discrepancy between ‘territorial popularity’ and poor ‘numerical results’ on a voivodship’s scale. It has also been shown that the rate of support for the populist option does not depend primarily on where voters live (urban vs. rural) but on the function of their community (Kowalski, 2003). Rural areas located close to cities or close to the tourist industry offer little support for the popular option.

The right-wing option appears to be particularly well established in the southern part of the voivodship. The gminas that offer the highest rates of support to the right-wing can be found south of Myślenice and include most of Podhale and all of Orawa. Another core right-wing region is found in the Nowy Sącz area between the towns of Limanowa and Grybów. While not as large as in the case of populist parties, declines in voter support for right-wing candidates in cities and towns in comparison to surrounding areas can be observed in Kraków, Bochnia, Sucha Beskidzka, Nowy Targ, Szczawnica, and Krynica-Zdrój. In general, Małopolskie voivodship can be divided into a southern part (right-wing) and a northern part (non-right-wing). The one exception, of course, is Gorlice powiat.

Six social and economic statistics were analyzed for the gminas listed in Fig. 6. Age and gender were omitted, as both of these traditional factors have already received a great deal of attention in the literature. A traditional statistic such as education was used in the study. Education is often seen in the sociological literature as a simple statistical element used to describe the profile of individuals expressing their support for different political parties (Dzwończyk, 2006; Wojnicki, 2006). In this study, however, education is treated as an indicator of voter turnout as well as regional economic development. Table 3 lists the six statistics used in the research study. Each statistic is an arithmetic average of values obtained for each of the 18 gminas analyzed for each given political option. The rubric labeled ‘gmina average’ lists the arithmetic average for all 182 gminas in Małopolskie voivodship.

The smallest differences between groups of gminas were observed in the middle school education index. This index was used in the study because, unlike elementary schools, middle schools are not found in remote gminas and middle

Table 3. Selected social and economic data for selected groups of gminas

Data for 2008	1	2	3	4	5
Middle school education index	94.8	96.9	98.4	94.4	95.1
Higher education (%)	4.1	7.0	7.4	2.8	2.9
Incomplete elementary school education or lack thereof (%)	3.3	2.6	2.6	4.0	3.7
Gmina revenue per capita (PLN)	874	1,449	1,503	667	616
Entities of national economy registered in the REGON system (private sector only; listed per 1,000 residents)	65.6	85.4	100.4	49.2	54.4
New residential floor space (m ² /100 residents)	46.5	27.8	83.9	19.6	40.3

Explanation: 1 – gmina average; 2 – left-wing gminas; 3 – liberal gminas; 4 – populist gminas; 5 – right-wing gminas

Source: Author's work based on Główny Urząd Statystyczny, Bank Danych Lokalnych data

school education is mandatory in Poland. The index tends to be higher for liberal gminas, although, it does not vary much across the voivodship. It is also interesting that its value is below 100 (1) across the entire voivodship.

The middle school education index is lowest in populist and right-wing areas, where students tend to leave home towns, which do not have a middle school. In some cases, students pursue education in other areas featuring better middle schools. Index values below 100 for liberal gminas are generated mainly by the city of Kraków, which serves as an educational commuter hub for most suburban children, where the index is very low. Commuting is a challenge but it enables the selection of a top school and is generally related with parents' commuting needs. The middle school education index, however, does not differentiate gminas in a fundamental manner.

A different picture emerges in the case of other levels of education. The study analyzed the percentage of individuals with higher education, with incomplete elementary education, and with no education at all. The disproportions between groups of gminas are large, reaching over 250%. The educational level of liberal and left-wing gminas is similar, although they occupy different geographic spaces. The liberal population is largely associated with Kraków and its metropolitan area. The left-wing population lives in small and midsize cities located between the Kraków Metropolitan Area and the Upper Silesian Metropolitan Area. The 'other form of education' index is 50% lower in right-wing and populist gminas.

Regardless of the reason (2) behind this state of affairs, right-wing and populist gminas cannot expect rapid changes, as they do not have a mobile population capable of prompting local change. The disproportions found in the 'least educated' category are smaller, however, they also do not favour right-wing and populist gminas. There are historical reasons for this and differences in this category are diminishing simply because the uneducated population is becoming smaller with time. This is not a factor that will play an important role in shaping differences between particular areas in Małopolskie voivodship.

The remaining three statistics are more economic in nature and vary quite a lot from region to region. In 2008, gmina revenue per one resident clearly puts liberal gminas with left-wing gminas and right-wing gminas with populist gminas. This state of affairs not only illustrates potential for regional economic development but also points to wider differences in the future. A wide divide between the two aforementioned groups of gminas will likely create a social and economic divide throughout Poland. Gminas that do not focus on change (read: education) find fewer economic opportunities and do not utilize their own potential to the extent that they could. It is reasonable to expect that if some of the gminas located in attractive tourist areas (Jabłonka, Ochotnica Dolna, Rytro) make an effort to attract tourists and change their employment structure to better serve tourist traffic, they will start to lean more towards more liberal political options. This is what happened to other tourist gminas such as Zakopane, Poronin, and Szczawnica.

Low income across the agricultural northern fringe of the voivodship, characterized by less non-agricultural economic development than the Carpathian fringe, are one sign of the lack of a driving force able to improve the economic situation and prompt social change. The population in this area supports the left-leaning populist option and does so with a sense of entitlement deepened by the relatively high rate of unemployment (vs. the provincial average). This is where the Self-Defense of the Republic of Poland Party gained most of its support. This area is expected to continue to sink below voivodship's averages faster than areas considered to be more right-wing. Its decline in terms of social and economic development will result in an even wider gap with growth drivers such as large cities as well as other non-urban parts of the voivodship.

Gmina revenue is directly related to the number of entities of national economy (REGON system) registered per 1,000 residents. Revenue is high in liberal-leaning gminas, somewhat lower in left-wing gminas, and 50% lower or more in populist and right-wing gminas. It is important to note that this is not solely the result of different levels of urbanization. There is large number of rural gminas across Małopolskie voivodship with a large number of entities

of national economy. This is especially true of tourist gminas located along the Slovak border. This results in two types of gminas: progressive and stagnant. Progressive gminas are better at facing change and are able to effectively fight recession when it affects some of its business sectors, as they possess a number of different business sectors and a diverse range of educational backgrounds. Stagnant gminas, especially agricultural gminas, are less sensitive to dynamically changing economic conditions, however, they are also not able to quickly change their economic bases, which results in their inability to produce social change.

The number of residential buildings completed, as measured by the amount of floor space available per 100 gmina residents, is one way of gauging economic development from gmina to gmina. Liberal gminas, once again, rank best in this regard. Large amounts of residential floor space can be the product of many different construction projects. In a large city such as Kraków, this is simply the norm. Kraków residents also tend to migrate to suburban gminas, which also boosts their available floor space. However, urban gminas other than Kraków also boasted large amounts of residential floor space in 2008.

The amount of residential floor space as well educational background help classify gminas into liberal and non-liberal, with left-wing gminas offering less floor space than even populist gminas. Further research is needed to learn whether this is the result of market saturation or lack of demand. Other potential causes for this could be a gmina's unwillingness to invest in new residential infrastructure or its residents' inability to purchase a flat for financial reasons. The latter factor might create a false sense of market saturation, with some individuals renting or simply being stuck living with their family because of their inability to afford their own flat. Right-wing gminas possess twice as much residential floor space as populist gminas, which is a sign that economic development is taking root there. Gminas that lean towards the populist movement are the worst off in this respect.

CONCLUSIONS

Finally, it must be noted that there is a strong relationship between the social and economic factors in question and political preferences. Of course, it is not political preferences that are primarily responsible for the disproportions. They merely supplement the disproportions, often contributing to their extent. Areas that are currently more urbanized, more affluent, and affected by fewer social problems resulting from unemployment also tend to lean towards the liberal option or the left-wing option. One distinction needs to be made: the left-wing option has been traditionally more associated with heavily industrialized areas

and the liberal option has been more associated with the Kraków Metropolitan Area as well as large tourist towns.

Małopolskie voivodship has significant potential for further tourism development, with Kraków as a strong driver of growth as well as a source of innovation and cultural development. In light of this, the liberal option should be able to garner more support in the future. The left-wing option does not possess this type of natural base for growth and is not expected to dominate the voivodship in the future. In fact, it is expected to decline. One niche area of support for the left-wing option may be left-leaning populist poviats, which may choose to support the left-wing in the event of political disintegration of the populist movement. Another reason why traditionally populist poviats may choose to support left-wing candidates would be a shift in the employment structure characterized by a decline in the number of farmers. This does not seem likely in the near future and not so near future in Małopolskie voivodship.

The populist option will remain an important factor on the political scene in Małopolskie voivodship, however, its decline may occur more rapidly in places where non-agricultural development will stimulate changes in employment structure. Such changes may take place outside of poviats where the populist option is particularly popular. This includes Miechów powiat, Proszowice powiat, and the northern fringes of adjacent ones. It is not possible to identify the factors that would, in the long term, create new electoral segments sympathetic to the populist movement. In the long term, the movement must be willing to make substantial changes in its platform in order to maintain a meaningful position in the political marketplace of Małopolskie voivodship.

Due to historically moulded cultural shape of Małopolskie voivodship society (Kowalski, 2003) the right-wing option is the most important option in terms of the number of votes cast during the last 15 years and one of the two most important options – the populist option being the other – in terms of territorial coverage. For this reason, the right-wing option is also supported in gminas that offer above-average rates of support to liberal and populist parties. On the other hand, it does not garner much support in left-wing gminas. In a political sense, the right-wing option has also been historically the broadest of options, incorporating a variety of political entities. Its basic core consists of economically disadvantaged gminas featuring lower quality infrastructure and standard of living. The only effective and permanent means of changing this situation is regional economic development. Studies in tourism-oriented gminas have shown, however, that this type of solution shifts the electorate towards centrist and liberal parties. This does not mean that such shifts occur rapidly. Social changes driven by a variety of factors take place rather slowly across Małopolskie voivodship, which is a region rooted in conservative values. Another reason for the slow rate of social change

is the region's relative lack of population mobility. On a national level, lack of mobility is generally associated with support for conservative political options, while highly mobile populations tend to support left-wing and liberal factions (Kowalski, 2000; Kowalski, Śleszyński, 2001).

Voter turnout data generated by the democratic election process is a very important source of spatial information. Its usefulness is determined by the degree to which it is processed. Basic election data can be correlated with other social, demographic, and economic variables. Historical factors must not be omitted either, as they often shape the social and economic characteristics of different regions in different ways. The study of relationships between electoral preferences and economic as well as social issues can supplement existing population research. It can also help to develop a more in-depth look at future directions in the social and economic arena.

NOTES

- (1) This is the result of the method used – arithmetic average for gminas of interest.
- (2) This may be related to a locally lower affinity for higher education or with the emigration of local individuals with higher education. Such individuals have a better chance of finding a job in urbanized liberal and left-wing gminas.

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INNER-CITY TRANSFORMATIONS AFTER SOCIALISM. FINDINGS FROM INTERVIEWS WITH NEW RESIDENTS OF PRE-WAR TENEMENT HOUSES IN GDAŃSK

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ABSTRACT. Issues of intense suburbanization and urban sprawl have been the most discussed threads in the recent debate on urban development in Poland. Meanwhile, in numerous cities of Western Europe signs of inner-city revival have been observed and investigated. Led by demographic and lifestyle changes alike, such reurbanization trends are found to be closely related to household transformations. Results of undertaken studies indicate that residential preferences of non-traditional households, such as singles, cohabitations, childless couples or flatsharers, gravitate to inner-city living. The aim of this paper is to reveal similar tendencies in a postsocialist city, using the example of Gdańsk. Presented results of statistical and qualitative data analyses point towards confirmation of incipient reurbanization, although with several distinctions following from the postsocialist context.

KEY WORDS: Poland, Gdańsk, reurbanization, inner-city transformations, demographic change, residential preferences.

INTRODUCTION

Despite being frequently employed in human geography, the concept of inner city eludes simple definition. Usually understood as an indefinite area surrounding the historical city core or central business district, it is most often associated with material and social deprivation (Johnston et al., 2000: 396) and thus has a negative connotation. Yet, as any element of urban landscape, also the inner city is subject to changes. Recently signs of its incipient metamorphosis have been observed across Europe.

While the 20th century was marked by predominant processes of suburbanization, the focus of urban research at the turn of the century has been extended to include reurbanization tendencies (Szymańska, Biegańska, 2011). This final phase of the cyclical urbanization model, as theorized by L. van den Berg et al. (1982), consists in gradual retreat to the urban region's city core and slackening of depopulation trends in inner-city areas. In fact, while many Western European cities have been 'approaching reurbanization', it is acknowledged that 'these new trends are not simply a reversal of flows associated with the counter-urbanization of the 1970s, nor indeed are they limited only to gentrification, but may involve new population groups' (Ogden, Hall, 2000: 369). Several studies of these 'new population groups' reveal that they are likely to recruit from non-traditional living arrangements, alternative to the nuclear family model (Ogden, Hall, 2004; Haase et al., 2005; Bromley et al., 2007).

The abundance of non-traditional household types, such as singles, cohabiting couples, one-parent family households or unrelated flatsharers, is considered to be one of the outcomes of the Second Demographic Transition (SDT). Coined by R. Lesthaeghe and D. van de Kaa (van de Kaa, 1987, 1994; Lesthaeghe, 1995) the term designates contemporary changes in fertility and family-forming patterns, articulated in natural population decrease, postponement of childbearing and entering formal unions, or even a complete departure from either of these practices. The SDT effects, closely related to the wider plethora of contemporary lifestyle changes, are, quite understandably, most pronounced in large urban centres and have a considerable impact on housing.

Firstly, the increase in the number of households, derivative of the individualization and atomization of social life but also connected to multiplication of available living-arrangement options, feeds housing demand. For instance, Living Apart Together (LAT) couples form in fact two separate households in lieu of one. Hence, despite declining urban populations many cities across Europe have noted increases in the overall number of households (Ogden, Hall, 2000). Furthermore, not only the need for additional housing arises, but residential preferences become more diversified. Secondly, non-linearity of household transitions has a significant bearing on housing biographies. Instead of following the traditional path which starts from living with parents through renting as a single student or flatsharer towards starting a family and purchasing a flat or house of one's own, possibilities have become many and varied. Therefore, a sequential housing career ladder has become increasingly replaced by irregular schemes resembling a game of snakes and ladders (McCarthy, Simpson, 1991). Thirdly, as the individual lifestyles become more diversified and volatile, residential needs and preferences are more likely to alter as well. Flexible housing environment then becomes one of the most valued qualities. It allows, for example, transforming

the same dwelling to correspond to the changing household configurations. Otherwise, non-flexible housing structures may stimulate residential mobility, 'forcing' the residents whose requirements cannot be fulfilled to move to a better adjusted dwelling.

Given the three circumstances combined, it may be stated that specific needs and preferences of non-traditional households tend towards accessibility, universality, functionalism, and adaptability which are prerequisites of residential flexibility (Buzar, Grabkowska, 2006). Such high standards of choice of dwelling, allowing maximum leeway both in household arrangements and organization of daily life, in fact come down to two key conditions. On the one hand, the bigger the potential of housing structures for change, the better. On the other, central location of a dwelling and its proximity to public transportation systems, shopping and entertainment facilities is also of major importance. Both criteria, and especially the latter, are relatively easily met in Western European inner cities (Tallon, Bromley, 2004), which may offer an explanation for their growing residential attractiveness among non-traditional households. The aim of the following sections is to prove that this assumption remains valid in a postsocialist city, based on a case-study analysis of inner city in Gdańsk.

POSTSOCIALIST INNER-CITY TRANSFORMATIONS. CASE STUDY: GDAŃSK

The postsocialist city of Gdańsk seems to be an interesting case study for a number of reasons. For instance, it boasts a long and complicated history, marked by abrupt multidimensional changes translated into its landscape. Moreover, since it played a significant economic role during socialism, with the currently insolvent Gdańsk shipyard as the national flagship industry, postsocialist transformations are all the more distinct. In addition, it is a second-order Polish city, and as such is relatively under-researched.

Signs of the Second Demographic Transition in Gdańsk have become manifest since around the 1970s when the upsurge in household numbers began to outpace the stationary population development (Fig. 1).

Although between 1988 and 2002, i.e., the years of the last two national population censuses, the number of inhabitants in Gdańsk decreased only by 0.6% (from 464,308 to 461,334), the trend has gathered momentum and according to statistical projections it will result in the total population of circa 360,000 in 2030 (Urząd Statystyczny, 2006: 113) (1). Meanwhile, during the same intercensal period not only the number of households increased by 15.4% but their structure changed significantly as well, resulting in a decline of the mean household size from 2.82 to 2.45 persons per household (Fig. 2).

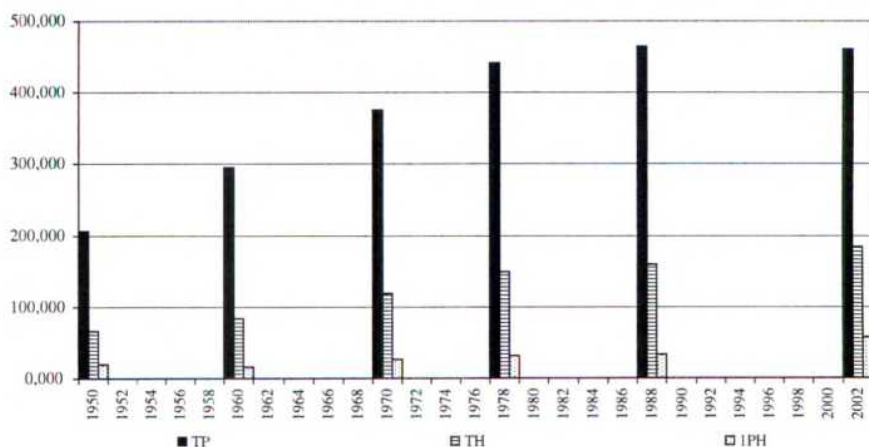


Fig. 1. Dynamics of population and household change in Gdańsk according to national census data, 1950–2002

Explanation: TP – total population; TH – total households; 1PH – 1-person households

Source: Author's own calculations based on National Census Data 1950, 1960, 1970, 1978, 1988, and 2002 (Narodowe Spisy Powszechne przeprowadzone w latach 1950, 1960, 1970, 1978, 1988 i 2002)

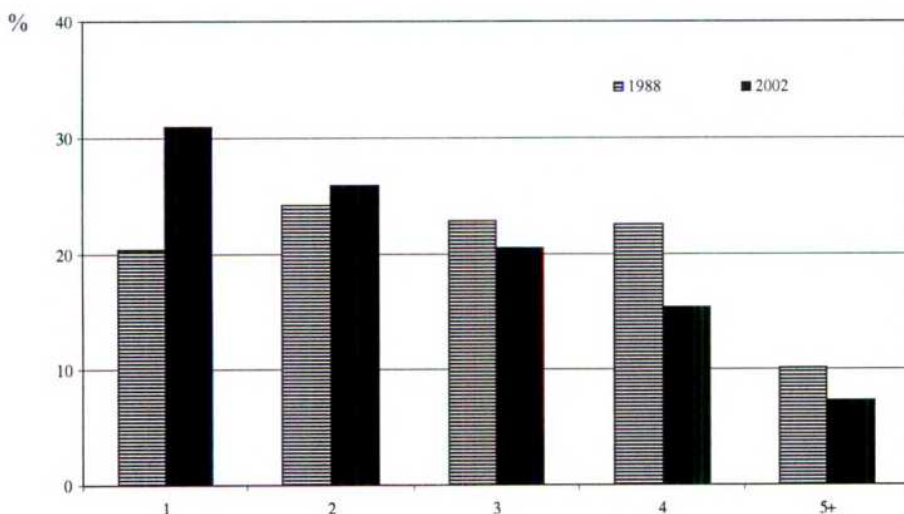


Fig. 2. Household structure by size in Gdańsk, 1988 and 2002

Explanation: 1 – 1-person households; 2 – 2-person households; 3 – 3-person households; 4 – 4-person households; 5+ – 5- and more-person households

Source: Author's own calculations based on National Census Data 1988 and 2002 (Narodowe Spisy Powszechne przeprowadzone w latach 1988 i 2002)

Despite the fact that the lack of comparable statistical data at the level of districts in 1988 hinders analysis of intercensal demographic change in inner-city Gdańsk, there are several hints available. For instance, the share of 1-person and non-family households in 2002 in Wrzeszcz Dolny, an old neighbourhood with domination of pre-war residential buildings, was relatively higher than the city average (Table 1) (2). Even though this anomaly could be partly explained by higher proportions of elderly women residing in the inner city, it seems that such interpretation is insufficient.

Table 1. Non-traditional and traditional household types in Gdańsk and Wrzeszcz Dolny in 2002

Households by types	Gdańsk	Wrzeszcz Dolny
	percentage of total number	
1-person households	30.9	32.9
Non-family households	33.3	36.2
Married couples	73.6	70.5
Cohabiting couples	2.8	2.8
Lone parent households	23.6	26.7

Source: Author's own calculations based on National Census Data 2002 (Narodowy Spis Powszechny 2002)

As for residential preferences, it needs to be noted that like in most other second-order cities in Poland also in Gdańsk the main reason for population decline is out-migration to the suburbs. Strong suburbanization trends have gathered momentum after the collapse of the socialist system, amplified by such factors as 'restitution' of free choice of housing based on individual needs and preferences, lack of coordinated spatial policy within urban regions, investors' pursuit of sites for greenfield housing development and intentional policy of local governments seeking to attract new residents (Lorens, 2005: 40–41).

A similar 'outward' direction has dominated intra-urban migration flows in Gdańsk. The migration balance between 1995 and 2004 was positive only in two peripheral boroughs, Zachód (West) and Południe (South), where the majority of new housing developments have been located after 1989 (Fig. 3) (3).

To date, there has not been much statistical evidence of the opposite, inner-city oriented migration trend in Gdańsk. However, several types of transformations ongoing in postsocialist inner city create possibilities for influx of new population groups. One of the most significant is related to privatization of municipal housing resources. In Gdańsk the share of this type of tenure has considerably decreased during the intercensal period 1988–2002 in favour of private ownership (Fig. 4). In 2007 alone, 1,894 municipal dwellings were sold to sitting tenants, while

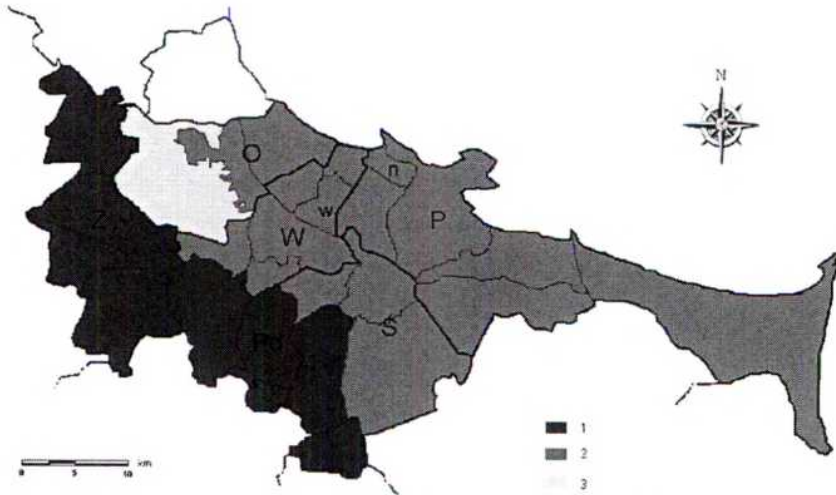


Fig. 3. Intra-urban migration balance in Gdańsk by boroughs, 1995–2004
Explanation: O – Oliwa; Pd – Południe; P – Port; Ś – Śródmieście; W – Wrzeszcz; Z – Zachód; case-study urbanistic units: n – Nowy Port; w – Wrzeszcz Dolny; migration balance: 1 – inflow; 2 – outflow; 3 – uninhabited unit

Source: Author's own elaboration based on Zaborski, 2006

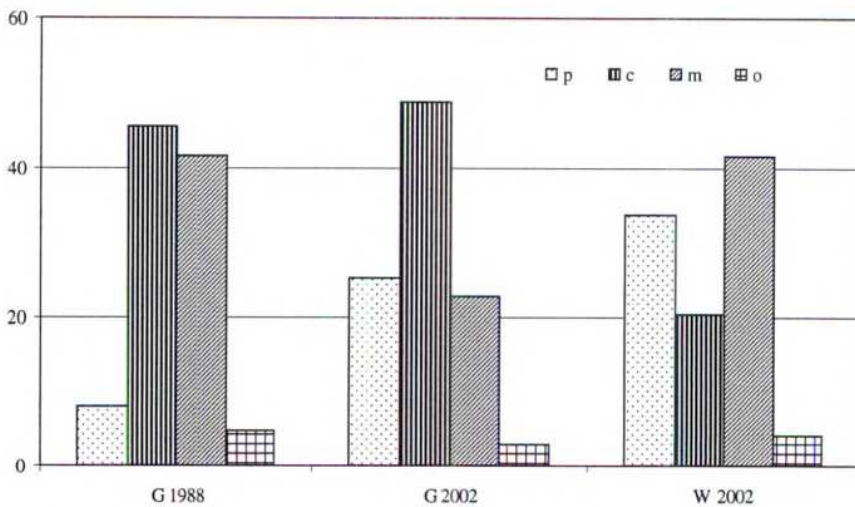


Fig. 4. Changes in the tenure structure of dwellings in Gdańsk (1988 and 2002) and Wrzeszcz Dolny (2002)

Explanation: p – private ownership; c – cooperative ownership; m – municipal ownership; o – other

Source: Author's own calculations based on National Census Data 1988 and 2002 (Narodowe Spisy Powszechne przeprowadzone w latach 1988 i 2002)

in the two previous years the number of such transactions exceeded 2,000 (Urząd Miejski w Gdańsku, 2007: 138). Such high interest is mainly the result of the local authorities' policy encouraging municipal tenants to purchase the dwellings they rent. The incentives include 90% discount on the dwellings' market value, which has proven to be very effective considering the soaring prices in the estate market during the recent boom.

While it is not possible to compare the extent of tenure change in inner-city Gdańsk, due to missing data for the year 1988, it could be expected that the privatization impact has been even greater because of domination of municipal, typically pre-war, housing stock in these areas. In Wrzeszcz Dolny the proportion of municipal dwellings is however still quite high, which allows to assume that the buy-outs will continue.

Furthermore, the inner city of Gdańsk has begun to experience a massive generational replacement, with flats usually either being inherited by grandchildren of veteran residents or rented out, not always along legal lines, to avoid taxes. Although there are no reliable statistics to confirm the size of such processes, several local experts claim that both of them are common in inner-city Gdańsk (interviews conducted by the author, see next section).

Another noteworthy inner-city change, related to property letting, follows from influx of students renting accommodation and the so-called process of 'studentification' (Smith, 2005; Smith, Holt, 2007). In Gdańsk the majority of higher education institutions are clustered within or in close vicinity to inner-city neighbourhoods. Since flats in pre-war tenement houses offer student flatsharers attractive location, adaptability, and relatively low price they have increasingly seized the functions of overcrowded halls of residence. Even though there are some dark sides to studentification, as for instance rough relations with immediate neighbours, students' presence animates inner-city space and contributes to the development of numerous services and facilities frequented by other urban dwellers as well. For example, it is not by chance that the biggest vegetarian restaurant in Tricity and two most popular milk bars, i.e., low-price and self-service restaurants, are located in Wrzeszcz.

Before turning to outcomes of empirical study on residential change undertaken in two inner-city neighbourhoods in Gdańsk, it might be useful to look into the specificity of the Second Demographic Transition in postsocialist context. Juxtaposition of consequences of socialist housing policy and the SDT effects reveals certain interdependencies (Table 2). For instance, severity of housing deficit is further increased by the upsurge in household numbers. Thus, despite typically declining population in a postsocialist city, the housing demand rises. In addition, the rigid and standardized features of socialist housing structures, such as prefabricated high-rise buildings, seem particularly unfit for users who

Table 2. Relations between housing conditions and demographic change in a postsocialist city

Postsocialist housing legacy	Second demographic transition effects
severe shortage of dwellings	increasing number of households
large prefabricated housing estates designed with regard to the needs of nuclear families	variation of living arrangements, rise of non-traditional households
mass-produced, standardized architecture	differentiation of lifestyles, individualization of preferences
residential immobility, rootedness	mobility, flexibility and change
socially and materially degraded inner city	reevaluation of inner city

Source: Author's own elaboration

value adaptability, mobility, flexibility, and urban lifestyle. On the contrary, these qualities may be easily provided in old, centrally located neighbourhoods, which not only is an attraction factor but also holds potential that the lost splendour of the postsocialist inner city, intentionally neglected by the former ideology, is restored.

As mentioned before, for the time being demography-led reurbanization tendencies are (yet) statistically insignificant, hence the choice of a purely qualitative method applied in the case study described in the next section.

OLD RESIDENTIAL AREAS OF GDAŃSK IN THE EYES OF NEW INHABITANTS

Wrzeszcz Dolny and Nowy Port, two inner-city neighbourhoods of Gdańsk, each with the share of pre-war residential buildings exceeding 75%, were chosen for a closer investigation. While Wrzeszcz Dolny is located more centrally than Nowy Port, accessibility of both districts is much higher in comparison with the new housing estates in Zachód and Południe boroughs (Fig. 3) (4). Both case study districts suffered much degradation in the second half of the 20th century and are still on their way to recovery from disinvestment and social ills. Despite the overly stereotyped view of the two neighbourhoods their perception has gradually started to change in postsocialism and they seem to become increasingly desirable addresses, which is especially evident in the case of Wrzeszcz Dolny.

The main research aims of the undertaken study thus included gaining information on socio-demographic characteristics of (relatively) new residents who moved into flats in pre-war tenement houses in either of the neighbourhoods

after 1989, as well as identification of predominant criteria of choice of inner-city dwelling. In addition, residential satisfaction in the context of households' needs and preferences was investigated, together with examination of consequences of new residents' inflow and presence in the old neighbourhoods.

Altogether fifteen semi-structured and in-depth interviews were conducted between July 2007 and May 2008, nine with households residing in Wrzeszcz Dolny and six in Nowy Port. The interviewees, representing non-traditional and traditional household types alike, were approached by means of a snowball sampling method and interviewed at their homes with the use of a digital recorder. The questions asked during the interviews concerned, *inter alia*, dynamics of household composition, housing biographies of individual members, motivations for moving, daily lifestyle patterns, quality of social relations, and technical condition of built environment, neighbourhood change (and potential for it), as well as own engagement in community actions. Information gathered from the residents was also supplemented by and confronted with opinions of local experts interviewed on issues related to signs of reurbanization and revitalization in inner-city Gdańsk (5).

General conclusions following from the analysis of the interview data confirm the assumed socio-demographic characteristics of the new residents. Their distinguishing features include relatively young age, overrepresentation of non-traditional household types, higher education (incomplete in the case of students) and professional occupation (often freelance and/or home-based), high residential mobility and 'urban' lifestyle patterns, such as eating-out on a regular basis or relying on public transport instead of owning a car.

Although the interview results verified the supposition that the main pull factor to inner-city living consists in the relatively low price of flats and their attractive location in terms of accessibility and abundance of retail and service facilities, aesthetics and functionality of pre-war architecture appeared as an important additional advantage. Especially the interviewed singles, cohabiting couples and flatsharers gave consistent accounts explaining how their flexible lifestyle requirements and volatile household configurations find response in accessibility and adaptability of their dwellings. The flats' adaptability in particular was commonly praised by the interviewees and accentuated as a key quality of inner-city dwellings.

Apart from wide-ranging array of repair and construction works (e.g., layout rearrangement, erection of mezzanine floors, etc.), creative interior design and its frequent changes aimed at best fulfillment of households' needs, most of the interviewees displayed also high levels of commitment in the shared maintenance of the tenement houses they live in. In conjunction with the overall quite positive

perception of the neighbourhoods and shared opinion on their high potential for development, the new residents may appear as forerunners and proponents of positive change extending well beyond their homes. Through the actions of *wspólnota mieszkaniowa*, i.e., a collective of owners in multi-flat buildings who are in charge of their management, the newcomers appear to be capable of not only greatly contributing to improvement of the built structures' technical condition, but also encouraging local community bonds and fostering activity among veteran residents.

Even if the detailed picture may be not too rosy, since numerous obstacles to common actions were adduced, the interviewees' personal engagement in upgrading the quality of inner-city life deserves more investigation in future. As repeatedly articulated during interviews with the local experts, such strategy of bottom-up revitalization has already proven more efficient than any revitalization projects as yet set up by Gdańsk authorities.

CONCLUSIONS

As shown by examples from Western Europe, demography-led and lifestyle-induced inner-city transformations pave the way for reurbanization. Similar potential for a positive inner-city change may be observed in postsocialist cities, even if such tendencies have not yet reached beyond initial stage. Attractions of inner-city living however seem to be gradually rediscovered and adaptability of old-built housing structures increasingly appreciated east of the former Iron Curtain. Several conditions characteristic of postsocialism, such as privatization of municipal housing stock or overall deficit of dwellings, may facilitate the revival of the postsocialist inner city, together with more global processes, e.g., studentification.

A consistent thread running through the accounts of the interviewed residents of inner-city Gdańsk indicates that the inflow of new inhabitants may be seen as stimulating material and social revitalization. Regarding the relative newness of this process it will need to be monitored further. For instance, even if gentrification has been so far either non-existent or very limited in postsocialist inner city, it cannot be ruled out in future. Without doubt, a reintroduced social mix, unlike the top-down imposed social mix during socialism, could contribute to sustainable development of postsocialist (inner) city. It remains to be seen whether this potential is not wasted.

NOTES

- (1) Recalculated for the 1988–2007 period, the population decline in Gdańsk reaches 1.9%.
- (2) The category of non-family households includes 1-person households and all multiple-person households without direct family links between household members (Główny Urząd Statystyczny, 1990: IV).
- (3) The term ‘borough’ is used here as a synonym for ‘district’ which is applied by the local planning authorities in Gdańsk to denote 6 large urban units consisting of several smaller districts (‘urbanistic units’, *jednostki urbanistyczne*).
- (4) Spatial development of Gdańsk is strictly conditioned by the city’s physiography and in particular by the presence of two natural barriers, a seacoast along the northwest-southeast axis, and a parallel edge of the moraine plateau. From its earliest settlement Gdańsk expanded in the north–west direction, towards the present-day cities of Gdynia and Sopot, concentrating in the so-called Lower Terrace. The Upper Terrace, i.e., the boroughs of Zachód and Południe, became the site of urban development no sooner than in the second half of the 20th century, hence, its dynamic residential growth in recent decades.
- (5) Among the 10 interviewed experts there were 2 urban planners, 3 representatives of private housing administrations, 2 municipal housing officers, 1 real estate developer, 1 real estate agent, and 1 representative of a local non-governmental organization.

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FILM FESTIVALS IN ŁÓDŹ AS A MAIN COMPONENT OF URBAN CULTURAL TOURISM

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ABSTRACT. In the early 19th century Łódź became a huge centre of textile production. However, the transformations in Poland after 1989 led to the decline of this industry. At present the city is looking for new forms of development, such as services, including tourism and culture. One of the most important elements of the cultural function in Łódź are film festivals, based on over 50 year long tradition of film making in this city. The aim of this article is to present the film festivals organized in Łódź, which are a tourist asset and a kind of tourist product (an event). They are at the same time an element of cultural tourism, part of which is event tourism, connected with festivals and film tourism.

KEY WORDS: Poland, Łódź, film festivals, film tourism, postindustrial city.

INTRODUCTION

The article concerns selected film festivals organized in Łódź. They are cultural and entertainment events, which are currently an important part of the city's tourist offer. The contemporary literature on the subject mentions a particular type of tourism, called cultural tourism. It is defined as a set of tourists' behaviours, resulting from their genuine interest in cultural heritage, as well as their participation in the widely understood contemporary cultural life (Kowalczyk, 2008: 13).

In this sense, participation in festivals (1) should also be considered as an element of cultural tourism. Festivals are treated as a tourist asset of cities and regions, as well as a kind of tourist product, defined as an event product (Kaczmarek et al., 2010: 106–107). Moreover, a part of cultural tourism is event tourism, where the aim is the participation in cultural events, such as film festivals

(Von Rohrscheidt, 2008: 72). Many cities in Europe base the development of tourism on cultural festivals. An example of this approach is Edinburgh in the United Kingdom or Kraków in Poland. Another notion appearing in the literature on the subject is that of film and TV tourism as a form of cultural tourism. The aim here is to visit places connected with film and television productions – film locations, studios, houses, and sites related to film and TV makers. In recent years this kind of tourism has become increasingly popular, which is the result of the growing influence of television and cinema on human life (Smith, 2009: 162). Trips made in order to take part in film festivals are also treated as a form of film tourism (Beeton, 2005: 11).

FILM ŁÓDŹ

Łódź is inhabited by about 740 thousand people. In the early 19th century it became a huge centre of textile industry and as such prospered until the transformations in Poland, which occurred after 1989. When the textile industry declined, the city started to search for new ways to develop. The new areas of development included industry (household equipment, electronics) and services (including tourism and culture).

The tradition of film-making in Łódź, which began after World War II, is extremely important in the development of today's cultural function of the city. In 1948 the Higher Film School was founded in Łódź, which is undoubtedly the best school of this type in Poland and one of the most renowned in the world. Today it is called the Polish National Film, Television and Theatre School (Państwowa Wyższa Szkoła Filmowa, Telewizyjna i Teatralna PWSFTviT) (2) (Lemann, 1998: 180–181). In 1945 the Feature Film Studio (Wytwórnia Filmów Fabularnych WFF) was established, which had been the largest institution of this type in Poland until 1989. After 1989 it was transformed into the Łódź Film Centre (Łódzkie Centrum Filmowe), which to much regret did not survive the transformation period and went bankrupt. Two new private firms involved in film and television production were set up in its premises: TOYA cable TV, which also owns big sound studios working for film and television, and Opus Film. The latter is an independent Polish film production company (Kronenberg et al., 2010: 196–197).

After the war there also appeared the Educational Film Studio (1949) and the Se-Ma-For Studio (1956). The former one produced nature films, documentaries and popular science films. It still exists today as the Educational Films and Program Studio (Wytwórnia Filmów Oświatowych i Programów Edukacyjnych WFO). Se-Ma-For was the biggest Polish producer of puppet and film animation.

It still exists, with a museum displaying collections of animated film memorabilia (www.wfo.com.pl/, Kronenberg et al., 2010: 192–193).

It must be stressed that developing its cultural function, Łódź started to compete for the title of the European Capital of Culture 2016. An important part of this fight was the organization of film festivals. Unfortunately, at the preliminaries in 2010 Łódź was not approved by the international jury of experts and did not pass to the next round of the competition. This was most certainly caused by the problems regarding the most important film festival in Łódź – Plus Camerimage.

THE MAIN FILM FESTIVALS IN ŁÓDŹ (3)

Film festivals in Łódź are organized by the following institutions: the Charlie Cinema, Łódź Culture Centre (Łódzki Dom Kultury ŁDK), Educational Film and Program Studio, the Polish National Film, Television and Theatre School and the Museum of Cinematography.

The Charlie Cinema was established in Łódź in 1994 at 203/205 Piotrkowska Street. Since the very beginning it has been presenting ambitious films and has organized many art and film events. A body which operates at the Charlie Cinema is the Film Łódź Association (Stowarzyszenie Łódź Filmowa) (since 2000), whose aim is to integrate Łódź film circles and conduct film and art projects.

Among the main festivals organized by the Charlie Cinema is the 'Off jak gorąco' Festival of Independent Cinema. It presents contemporary films made by independent artists and is directed towards young film makers, both professional and amateur, working off the main (commercial) stream of the film industry. It is held every year in summer (since 2006). Another example of an event organized by the Charlie Cinema is The 'Large Format' Film Makers Festival (Festiwal Twórców Powiększenie). Since 1999 it has been an annual event, now held in October. The festival presents renowned cinema personalities (in 'large format'), independent contemporary artists, as well as young film makers and debutants.

The Animated Film Festival ReAnimation is a different type of festival, devoted to amateur and professional forms of animation. The event has been organized every year in spring since 2004, at the Charlie Cinema. During the festival the organizers hold a competition for the best animated film, which is granted the Golden Snail Award. In July and August 2009 and 2010, the Charlie Cinema organized small-scale, free screenings of films, entitled The 'Film-picking' Summer Cinema Festival (Festiwal Kina Letniego Filmobranie). It was held on the premises of the postindustrial buildings in Łódź as a review of Polish and foreign cinematography.

In 2010 the most important event organized by the Charlie Cinema was the Cinergia Festival – the European Cinema Forum in Łódź. It was first organized in 1992 and in 2010 it had its 15th edition. It is held in November at the Charlie Cinema and other cinemas in Łódź, as a review of the major European film productions. The last edition included screenings of the best festival films in 13 cities and towns outside Łódź; the screenings were called the Cinergia Festival replicas.

The next important institution involved in organizing big film festivals in Łódź is Łódź Cultural Centre (Łódzki Dom Kultury – ŁDK). ŁDK is the largest cultural centre in the city, established in 1953. It promotes activities related to cinema, theatre, art, and education. The festivals organized by ŁDK include Polish Festival of Films about the Family (Ogólnopolski Festiwal Filmów o Rodzinie FOR). The idea behind it is to show a range of different kinds of documentaries and TV programs regarding the family. Polish productions are shown along with foreign films from France, Italy, Germany or Japan. The event has been held annually in Łódź since 2008, at the ŁDK cinema. The centre has also participated in organizing the interdisciplinary Dance Cinema Festival (Festiwal Kino Tańca) since 2001, held every two years in autumn. It presents dance films from all over the world, organizes dance and cinematography workshops, seminars, as well as a competition for the best Polish dance cinema films.

An interesting event combining film and travel is the ArtMediaTravel Festival (4), which is a combination of a festival and a competition, related first of all to the media and travelling. Its purpose is to present the Polish and foreign achievements regarding film, photography, as well as radio broadcasts, the Internet, music, and press, which deal with social, ethnic and travel issues. The originator and the moving spirit of this festival is Mirosław Olszycki, a traveler and author of travel books and films. The institutions organizing it are the ARKADIA Foundation and the Marvel Media Art Agency. The first festival was held in Łódź in 2001; so far there have been seven editions of the event, the latest one in April 2010.

The Włodzimierz Puchalski International Festival of Nature Films (5) is another Łódź festival organized by the WFO (Educational Film and Program Studio). It has been held regularly since 1980, in September. The event is combined with a competition and the idea behind it is to popularize Polish and international films about nature. The chief organizer is the WFO and other institutions, such as the 'Film-Nature-Culture' Association (Stowarzyszenie "Film-Przyroda-Kultura"), the Film Łódź Association (Stowarzyszenie Łódź Filmowa), ŁDK, and W. Puchalski Secondary School No. 7 in Łódź.

One of the most important institutions in Łódź involved in film-related activities is the Museum of Cinematography (6). It organizes one of the major

film events in Łódź – ‘The Man Under Threat’ Media Festival (Festiwal Mediów Człowiek w Zagrożeniu). The main aim of this festival is to present a review of professional and amateur film and radio documentaries. The material presented during the festival mainly regards pathologies, intolerance, problems arising from the political and economic transformation, politics, and other social problems. The event was first organized in 1990, first by ŁDK and later by the Museum of Cinematography.

The Leon Schiller Higher Film, Television and Theatre School organizes a very interesting event for film schools, called Mediaschool – the International Festival of Film and Television Schools (Mediaschool – Międzynarodowy Festiwal Szkół Filmowych i Telewizyjnych). It presents films made by students from all over the world and lasts three days. It was first organized in 1994. The festival includes a competition, as well as additional events, such as reviews of films from selected film schools, retrospective reviews, or presentations of film-making and television equipment (7).

PLUS CAMERIMAGE – THE INTERNATIONAL FILM FESTIVAL OF THE ART OF CINEMATOGRAPHY (CASE STUDY)

The last event we are going to discuss is Plus Camerimage – the International Film Festival of the Art of Cinematography. It is not held in Łódź any more, but let us present it briefly, considering its role in the cultural development of the city. Camerimage is an event devoted to cinematographers, which makes it one of very few festivals of this type in the world (8). It was also one of the most important festivals promoting Łódź as a city competing for the title of the European Capital of Culture 2016. Camerimage is organized by the TUMULT Foundation, established by Marek Żydowicz in Toruń. The history of the festival should be divided into three periods: Toruń, Łódź and Bydgoszcz. The first Camerimage Festival was held in Toruń in 1993. In 2000 due to a conflict with the city authorities, the event was moved to Łódź, where it was organized until 2009. It was the year when the plans of the city centre reconstruction were taking their final shape. The reconstruction was to include investments in culture. Among other things, there were plans to build two large buildings for the purposes of the Camerimage Festival. However, in 2010 the President of Łódź, Jerzy Kropiwnicki, who actively supported the festival and the investments, was dismissed from his post. As a result of the change of authorities, the investments were delayed and the new authorities and the Camerimage organizers came into severe conflict. Finally, in an atmosphere of scandal, Marek Żydowicz moved the festival to Bydgoszcz, where its next edition was held in 2010.

In June and July the author conducted a survey regarding Camerimage. 150 questionnaires were distributed among selected respondents in the centre of Łódź, 75% of whom were the inhabitants of the city and the remaining ones lived elsewhere. The questions regarded the knowledge of the Camerimage Festival, participation in the event and its role in the development of Łódź. The questionnaire also included questions about the conflict between the city authorities and the festival organizers. It must be stressed that the majority (93%) of the respondents were familiar with the festival, but only 23% took part in it. The respondents correctly identified the main aim of the festival (showing the cinematographers' contribution to film production), the name of the main award, the venue and the month when the event was held. Most respondents (52%) believed that the event had been first organized in Łódź; they were unaware of the actual venue (Toruń). They were also familiar with the name of Marek Żydowicz, which may have resulted from the fact that the conflict with the city authorities was widely commented by the media.

About 60% of the respondents knew about the plans to build new buildings for the purposes of Camerimage and 55% heard about the conflict between the city authorities and the festival organizers. As far as the causes of the conflict are concerned, most of the respondents pointed to financial reasons, while political reasons were mentioned rarely. About 45% of the respondents believed that the festival would be moved to another city as a result of a conflict (the survey was conducted at the time when the decision had not been taken yet). In the opinion of 64% of the respondents, the fact that Łódź could lose the Festival would badly affect Łódź and reduce its chances of becoming the European Capital of Culture.

With time it turned out that the respondents' predictions were correct. Camerimage was moved to Bydgoszcz (2010) and Łódź did not pass to the next stage of the competition.

CONCLUSIONS

The film festivals described in this article are tourist products, which are important for cultural urban tourism. They are essential for developing the tourist function of Łódź, based on cultural development. In this sense they are also an element of change in Łódź as a post-industrial city during the transformation period, after 1989 (Fig.1). From the early 19th century until 1989 Łódź was based on textile industry, sending its products to the eastern market. The changes taking place in the city as a result of the political and economic transformation led to the decline of this industry. This in turn led to the dissolution of large state enterprises

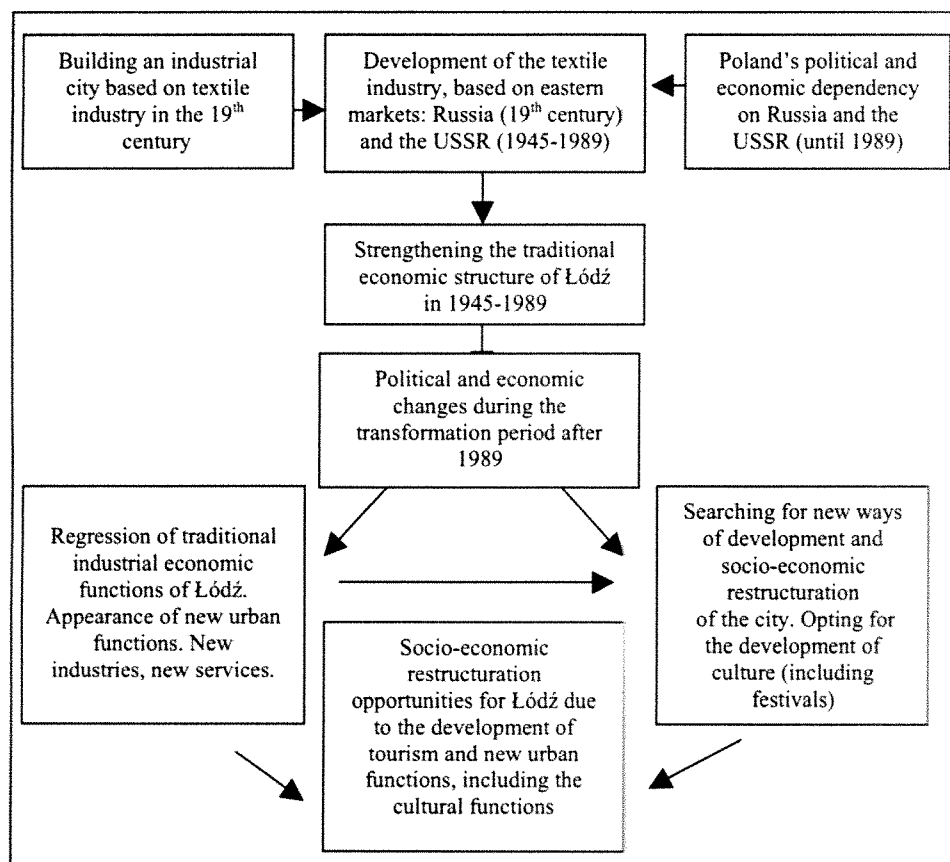


Fig. 1. Model of the socio-economic changes in the city as a result of the transformation

Source: Author's compilation

and common unemployment. Services were chosen as a new way to develop the city. Among the most important ones were tourist services, based on culture. At present, several dozen cultural events are held in the city every year, including the film festivals described in the article. It must be stressed that the role of culture and other services (science, higher education, commerce) may soon turn out to be crucial for the transformations taking place in Łódź.

The author divides the events (festivals) described in the article according to their rank and scale (Table 1) into the following categories: mega-events (high rank, large scale, present in the world media, have influence on the country's economy), distinctive events (high rank, small scale, commonly recognized and identified with the spirit of the city or region), large-scale (large scale, low rank, fairly popular, well-known, with a large audience), and local (low rank, small

Table 1. Types of Łódź film festivals according to rank, scale and regularity

Festival	Type of event-festival according to rank and scale	Type of event – festival according to regularity
Off jak gorąco	distinctive	regular
Festiwal Twórców Powiększenie (The 'Large Format' Film Makers Festival)	distinctive	regular
The ReAnimation Festival	distinctive	regular
Festiwal Kina Letniego Filmobranie (The 'Film-picking' Summer Cinema Festival)	local	irregular
The Cinergia Festival – the European Cinema Forum	large-scale	regular
Ogólnopolski Festiwal Filmów o Rodzinie FOR (Polish Festival of Films about the Family)	distinctive	regular
Festiwal Kino Tańca (Dance Cinema Festival)	local	regular
The ArtMediaTravel Festival	local	regular
Włodzimierz Puchalski Nature Film Festival	distinctive	regular
Festiwal Mediów Człowiek w Zagrożeniu (The 'Man Under Threat' Media Festival)	distinctive	regular
Mediaschool Międzynarodowy Festiwal Szkół Filmowych i Telewizyjnych (Mediaschool – the International Festival of Film and Television Schools)	distinctive	regular
Plus Camerimage – the International Film Festival (editions 2000–2009)	distinctive	regular

Source: Author's compilation based on field study

scale, organized locally, at a small cost). Moreover, the festivals were divided into regular, irregular and one-time events (Kaczmarek et al., 2010: 107–110).

The majority of film events in Łódź are distinctive products, well recognized in the film circles and associated with Łódź, well established and held regularly. They are a part of the film heritage of the city. However, these events are rather exclusive and do not attract popular audience. There are also a few local festivals, which attract mainly the inhabitants of the city and region, and are commented on in the local media. A larger event is the Cinergia Festival, whose latest edition in 2010 was to fill in the empty space left by the Camerimage Festival and therefore was organized on a larger scale (with a considerable contribution from the city and region authorities).

Festivals have become a tourist asset of the city, a product – an offer for tourists, based on the film traditions and institutions in Łódź. A serious problem of cultural tourism in the city is the loss of the Camerimage Festival, which was certainly the most famous film event. It was a catalyst for the development of film-related cultural tourism. The loss of Camerimage and the resulting problems became one of the reasons why Łódź was rejected in its efforts to win the title of the European Capital of Culture 2016. On the other hand, we should stress the negative overtones of this situation, which badly affected the perception of the city in Poland and abroad. At present, especially after losing such a ‘star’ event as Camerimage, we should focus on creating a similarly strong and recognizable film festival. It can be any of the events described above, replacing the Camerimage Festival and accelerating the development of the cultural function of Łódź.

NOTES

- (1) A festival is a series of art events, usually of the same type (e.g., film, music, theatre), which is a review of the achievements in a given area, organized at a particular time under a common name, often in the form of a competition (Jędrysiak, 2008: 71)
- (2) The graduates of the PWSFTviT in Łódź include film directors, such as Stanisław Bareja, Feliks Falk, Andrzej Kondratiuk, Krzysztof Kieślowski, Juliusz Machulski, Janusz Morgenstern, Władysław Pasikowski, Roman Polański (five Oscar nominations, the Oscar for the Best Director in 2002 for ‘The Pianist’), Jerzy Skolimowski, Piotr Szulkin, Andrzej Wajda (the winner of the Oscar Lifetime Achievement Award in 2000), Krzysztof Zanussi, or Xawery Żuławski. The actors who graduated from the School include Janusz Gajos, Jan Machulski, Cezary Pazura, Pola Raksa, Elżbieta Starostecka, Paweł Wilczak, and Zbigniew Zamachowski. The cinematographers who graduated from the School are, among others, Andrzej Bartkowiak (he worked at ‘Speed’, ‘Dante’s Peak’, ‘The Devil’s Advocate’, ‘Lethal Weapon 4’), Sławomir Idziak (nominated for the Oscar in 2002 for ‘Black Hawk Down’), Jan Jakub Kolski, Zbigniew Rybczyński, Piotr Sobociński, Witold Sobociński, and Jerzy Wójcik (compilation based on the PWSFTviT materials and www.imdb.com)
- (3) The author uses materials obtained in 2010 in a survey conducted at the offices of the organizers of individual festivals; additionally, he made use of the interviews with the organizers. Another source of information were the websites regarding individual festivals. The author analyzed 12 film festivals organized in Łódź, whose main aim is to present different aspects of film making.

- (4) A similar event is the Explorers Festival, but it is larger, more prestigious and its main aim is not to present films but people – himalaists and travellers. That is why it was not discussed in this article.
- (5) Włodzimierz Puchalski (1909–1979) was one of the most renowned Polish photographers and makers of nature films. Trained to be an agronomy engineer, he worked at the Technical University of Lvov before World War II. After the war he started his spectacular career of a naturalist, photographer and film-maker. He made 58 films and won 17 awards at Polish and international festivals. He took part in many expeditions, e.g., to Spitsbergen and Antarctica.
- (6) The Museum of Cinematography in Łódź was open in 1976 as the Department of Film and Theatre Culture at the Museum of the History of Łódź. Since 1986 it has been an independent institution, presenting collections related to the past and present of film. It is situated at the former Scheibler's palace at 1 Zwycięstwa Square, not far from the PWSFTviT.
- (7) The PWSFTviT organizes the 'Łodzią po Wiśle' Festival – a Review of Students' Films from the Łódź Film School. It is an extremely interesting festival, because it is organized in Warsaw by the film school from Łódź. It presents the most interesting film etudes, which were prepared the previous year at the Directing and Cinematography Departments, as well as the Animation and Special Effects Studio at the PWSFTviT in Łódź. The festival is combined with a competition for the best film etude. It is described in the footnote as a festival organized outside Łódź.
- (8) During individual editions the Camerimage Festival was visited by many famous cameramen, actors and film directors.

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THE CONVERSIONS OF THE CITY STRUCTURE AND THEIR INFLUENCE ON THE DEMOGRAPHIC PHENOMENA

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ABSTRACT. The process of socio-economic change, which started in Poland in 1989, began the series of modifications in the structure of Polish cities. These changes embrace the economic sphere and the social sphere, as well as the habitable environment. The changes occurring in Polish cities resemble the processes present in settlement systems in highly developed countries. They take place, however, with some delay which is caused by the movement from the centrally controlled economy to the market economy and all the problems associated with it.

The aim of the presented article is to show the influence of occurring changes on the socio-economic development and demographic situation apparent in small towns of the Wrocław Metropolitan Area (WrMA). The attempt of evaluation of factors promoting the development was undertaken. The value of chosen characteristics was analyzed for the set of small towns of Dolnośląskie voivodship. The analysis of chosen quantities common for demographic phenomena in a longer time cross-section (1995–2008) pinpoints the irregularity of development of specific towns, which may result in negative effects for the whole area in the future.

KEY WORDS: Poland, Wrocław Metropolitan Area, Dolnośląskie voivodship, small towns, urbanization, demographic changes.

INTRODUCTION

The city as a specific settlement unit is the place of realization of a predominant social and economic activity of human beings and it changes constantly. The processes of change are usually dynamic and are often connected with the overcoming of many obstacles, of inner and outer character. The transformations of cities, which have been taking place for ages, have caused lots of changes concerning the function of cities and their roles. In consequence, it required specific

modifications in their morphology, resulting from the necessity of adjustment to current conditions. The mentioned phenomena have caused changes of activities and living conditions of inhabitants. It is strictly apparent in the number of citizens and the dynamics of its change, the density of population and wandering moves of citizens living in urbanized areas. The following phases of urbanization were responsible for a great number of structure conversions in cities, resulting in changes in the economic and social sphere.

The process of socio-economic changes, which started in Poland in 1989, began the series of modifications in the structure of Polish cities. These changes embrace the economic sphere and the social sphere, as well as the habitable environment. The changes occurring in Polish cities resemble the processes present in settlement systems in highly developed countries. They take place, however, with some delay which is caused by the movement from the centrally controlled economy to the market economy and all the problems associated with it. The sources of such phenomena are very complex and stem from the civilization changes and from the structural-economic changes (Szymańska, 2007). The mentioned events overlap with the processes of globalization and movement from the economy of stock processing to the economy based on knowledge. In the face of new challenges particular importance is the current and future community towns, its level of education and entrepreneurship, as specific capital which had made a substantial contribution to the development of the city.

The aim of the presented analysis is to show the influence of occurring conversions on the economic and social development and demographic changes apparent in small towns of the Wrocław Metropolitan Area. The attempt of evaluation of factors promoting the development was undertaken. The value of chosen characteristics was analyzed on the set of all small towns of Dolnośląskie voivodship. The analysis of selected quantities common for demographic phenomena in a longer time cross-section (1995–2008) pinpoints the irregularity of development of specific towns, which may result in negative effects for the whole area in the future.

STRUCTURE OF CITIES CONVERSIONS AS THE RESULT OF URBANIZATION

The urbanization phase connected with industrialization in Western Europe was characterized by a great number of extraneous population in the area of the city centre and city districts and the decrease in the number of inhabitants at the suburbs. In further stages of the urbanization development, bigger spatial expansion of city areas and the change of their inner structure are observed. Dynamic processes of urban arrangement inner split occur, present in the development

of city surrounding areas, in which the social functions, typical for cities, develop. The quick development of suburban areas was called suburbanization. This process has contributed to a gradual removal of socio-economic activities from the centre and the development of satellite units, in which the domestic architecture and economic activities were situated – these were the contributors to the reverse of urbanization. The output of this reverse process is seen in the creation and development of multi-centre metropolitan regions inhabited by a bigger proportion of population from a given country (Grzeszczak, 1996).

The crisis of central areas in a great number of cities has contributed to the outflow of work in order to restore their past function by means of revitalization and, in consequence, the attraction of the rich to the central areas (Ślódczyk, 2002). The centre once again becomes an attractive place and the location of modern economic branches in place of older, terminating functions take place. Still, the development of peripheries and satellite centre is present. Those phenomena belong to the phase of reurbanization. The above-mentioned phases vary in the degree of spatial structure changes, and the distribution of population and places of work. The passage from one phase to another is connected with the relocation of a broadly understood human activity and its spatial distribution in different areas (Domański, 2000; Szymańska, Biegańska, 2011).

The dynamic development of Polish economics, after joining the international market, has created conditions for come into being of metropolitan areas. Nowadays, this process is present in a form of migration, especially of young and educated people living in central districts and multi-family housing to the metropolitan areas. The causes of this phenomenon are different. The most common one is the quality of the environment, lack of turmoil, cheaper land and apartments (Warczevska, Warczewski, 2000).

In the surrounding of big cities – in Poland too – the processes of suburbanization occur along with the expansion of economic activity in the area of adjacent gmina (administrative region of the 3rd order). Not all gminas have equal possibilities for development in this situation. A lot of factors have to be taken into account. Together with the changes caused by the movement from industrial economics to the knowledge-based economics, the location factors of new investments change. Apart from so called ‘hard factors’ such as the price of ground, the cost of rent, costs of electricity, and costs of labour, ‘soft factors’ are also mentioned – social capital, quality of administration, climate for the activity, possibilities of education, the image of the city – among which the quality of public space, number and type of cultural objects and the living conditions are present. Each area has got its specific qualities resulting from the neighbourhood of different areas, natural conditions and the usefulness of this area for the development of different activity types.

THE CHARACTERISTICS OF THE AREA UNDER RESEARCH

The analysis embraced Dolnośląskie voivodship small towns in the period 1995–2008 (Fig. 1) (1). The introductory analyses of the population changes in small towns showed that the positive increase of the population occurred only in towns which belong to the Wrocław Metropolitan Area and in the town of Prochowice. The analysis concerned only those towns in order to find a relationship of possibilities and directions of development due to the location of the metropolis. The synthetic approach, which takes into account different characteristics of the examined towns, was also used to analyze the whole area of the Dolnośląskie voivodship. The Wrocław Metropolitan Area is a part of Dolnośląskie voivodship, in whose territory is located 91 towns, including 70 small towns with less than 20 thousand of inhabitants.

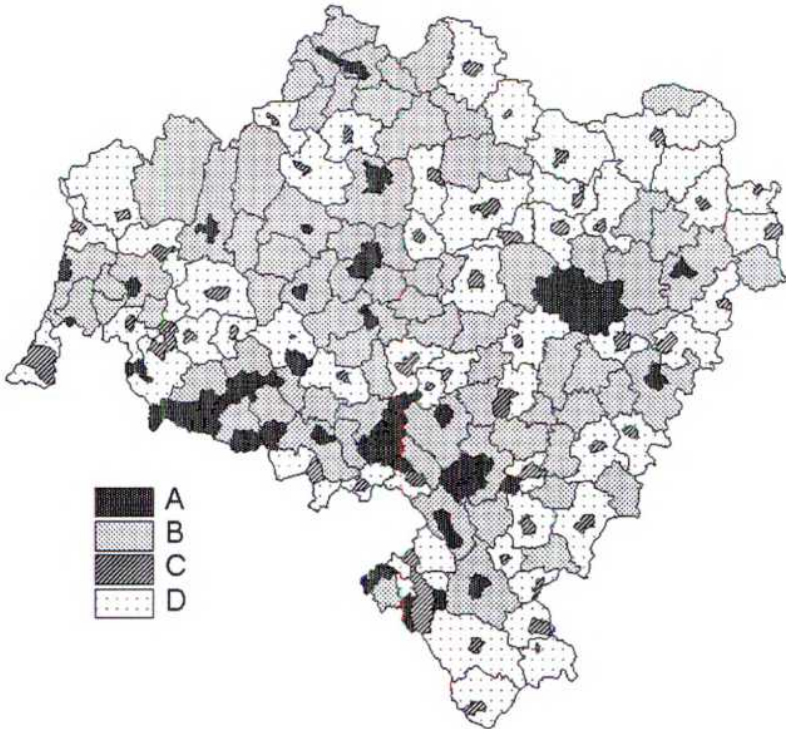


Fig. 1. Dolnośląskie voivodship – cities/towns and gminas

Explanation: A – urban gmina; B – rural gmina; C – town in urban-rural gmina;
D – rural district in the urban-rural gmina

Source: Developed by author based on data from Central Statistical Office

A part of the analyzed data concerns the period of 1995–2008. Due to the fact that such towns as Prusice and Siechnice, as well as Bogatynia with the population drop below 20 thousand people were included in the set in 2002, the closest existing data were adopted for them. Out of 70 small towns 18 are classified as urban gminas, the rest of them are situated on the area of urban-rural gminas. The demographic forecast prepared by Urząd Statystyczny (Statistical Office) in Wrocław predicts that by the year 2030 the population of Dolnośląskie voivodship will have systematically decreased. According to the prediction the number of people living in towns will have decreased by about 5%. The decrease of population in Wrocław, (the biggest in the 1990s), is causatively connected with the increase of the population in the gminas surrounding the metropolis.

The analysis of the development directions and demographical changes connected with them was limited to small towns only. Three groups of towns were taken into account: all small Dolnośląskie voivodship towns, towns which are situated in the Wrocław Metropolitan Area (Bierutów, Brzeg Dolny, Jelcz Laskowice, Kąty Wrocławskie, Międzybórz, Milicz, Oborniki Śląskie, Sobótka, Strzelin, Syców, Środa Śląska, Trzebnica, Twardogóra, Wąsów, Wołów, and Żmigród) (Fig. 2), and towns which are located in the indirect neighbourhood of Wrocław and which have the strongest connections with the metropolis (Kąty Wrocławskie, Środa Śląska, Brzeg Dolny, Sobótka, Oborniki Śląskie, Trzebnica, Jelcz Laskowice, Siechnice, Strzelin, and Wąsów).

The Wrocław Metropolitan Area was set up in 1999. At the beginning it consisted of 6 poviats (administrative region of the 2nd order) (i.e., oleśnicki, oławski, średzki, trzebnicki, wołowski, and wrocławski). After the admission of the Decree dated at 27th March 2003 (Ustawa z 27 III 2003 roku o planowaniu

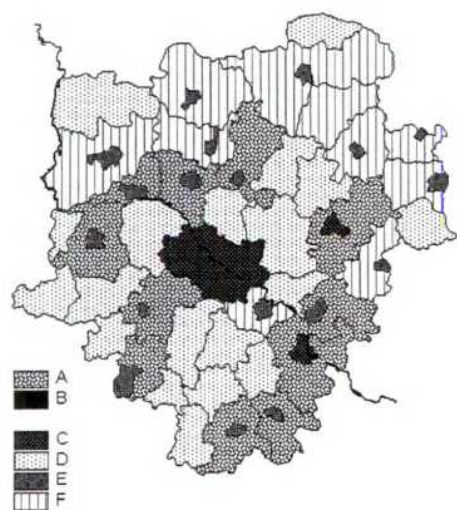


Fig. 2. The Wrocław Metropolitan Area – the location of small towns

Explanation: A – the surrounding of Wrocław; B – Odra river; C – urban gmina; D – rural gmina; E – town in urban-rural gmina; F – rural district in the urban-rural gmina

Source: Developed by author based on data from Central Statistical Office

i zagospodarowaniu przestrzennym), which introduced the obligation plan preparing of metropolitan area, in its boundaries there were 8 poviats and 43 gminas (Ossowicz, Polański, 2005). The area consists of Wrocław, which is the central city, two medium-size towns, Oleśnica and Oława, and 18 small towns. Wrocław as a central point of the metropolitan area has a high degree of urbanization and industrialization. To the local centers there should be included Oława, Oleśnica, Trzebnica, Milicz, Kąty Wrocławskie, Brzeg Dolny, Środa Śląska, Wołów, and Sobótka (Fig. 2). In the metropolitan area the dominant role belongs to Wrocław, where live 60% of all the population of the agglomeration. In the 1990s in the area of this agglomeration the structure of employment was changed. The main trends in Wrocław include decline in production activities and the increase in the number of workers employed in trade and services. In selected gminas surrounding Wrocław increased while the share of working in manufacturing operations (Jelcz-Laskowice, Brzeg Dolny, Kąty Wrocławskie) and maintains a high share of employed in trade and services. In the gminas of away from the centre there is a decrease in the number of working in a productive activity. Those changes show that a given spatial-economic structure has been built up, in which the central city and the surrounding towns have formed peculiar socio-economic profiles. Between Wrocław and the surrounding areas a network of contacts has been created due to which the process of the metropolitan development is present, which influences in a much bigger degree the development of the metropolitan area. The number of realized so far, as well as the projected changes allows to specify Wrocław as the city of high dynamics of changes in the structure. Those changes concern almost all spheres of life: communication infrastructure, services, building of dwelling-houses, green belt, and others. The spatial-economic structure of the Wrocław Metropolitan Area is the result of long-term accumulation of agglomeration effects and deglomeration processes (Korenik, Rogowska, 2007). Small and medium-size towns developing in the surrounding of Wrocław and the whole metropolitan area are of great importance.

THE ANALYSIS OF CHOSEN PARAMETERS

The analysis of the population change in the whole set of small Dolnośląskie voivodship towns shows that in the years 1995–2008 the positive increase of the population occurred mainly in towns which belong to the Wrocław Metropolitan Area. In towns from outside of the area only Prochowice had a positive population increase. It implies that the attractiveness of the area near Wrocław is quite high (Table 1). Within the compass of years 1995–2008 the highest increase of population was observed in Wiązów – 9.11%, Kąty Wrocławskie – 8.14% and in

Table 1. The change of the population number in small towns of WrMA in the years 1995–2008

No.	Territorial unit	1995	2000	2005	2008	Change	Change in%
53	Milicz	12.538	12.269	12.069	11.898	–640	–5.10%
54	Bierutów	5.282	5.210	5.102	5.065	–217	–4.11%
55	Międzybórz	2.332	2.285	2.333	2.358	26	1.11%
56	Syców	10.421	10.749	10.745	10.632	211	2.02%
57	Twardogóra	6.808	6.878	6.883	6.858	50	0.73%
58	Jelcz–Laskowice	15.370	15.158	15.253	15.340	–30	–0.20%
59	Strzelin	13.336	12.663	12.223	12.165	–1.171	–8.78%
60	Wiązów	2.141	2.250	2.225	2.336	195	9.11%
61	Środa Śląska	8.702	8.811	8.793	8.912	210	2.41%
62	Oborniki Śląskie	7.846	8.274	8.461	8.475	629	8.02%
63	Prusice	–	2.212	2.201	2.244	32	1.45%
64	Trzebnica	12.132	11.998	12.177	12.356	224	1.85%
65	Żmigród	6.383	6.461	6.597	6.540	157	2.46%
66	Brzeg Dolny	13.905	12.926	12.836	12.816	–1.089	–7.83%
67	Wołów	12.284	12.363	12.309	12.269	–15	–0.12%
68	Kąty Wrocławskie	5.088	5.236	5.415	5.502	414	8.14%
69	Sobótka	6.664	6.688	6.769	6.873	209	3.14%
70	Siechnice	–	3.979	3.841	3.851	–128	–3.22%

Source: Developed by author based on data from Central Statistical Office

Oborniki Śląskie – 8.02%. It is worth mentioning that the increase occurred not only in towns but also in rural gminas surrounding Wrocław (Fig. 3). The data concerning the years 2005–2008 for the gminas confirm further increase of the population in Kąty Wrocławskie and Oborniki Śląskie.

The analysis of the socio-economic activity in towns situated in the area of WrMA is based on two kinds of parameters. The first kind shows aspects such as the inflow of population, the migration balance and new residential buildings completed per 1,000 inhabitants. The second one of taken into account are economic indicators: the number of entities of national economy per 1,000 inhabitants and the percentage of workers in relation to the population of working age. The next indicator is the number of shops per 1,000 population. The above mentioned indicators specify the development of endogenous or exogenous functions. Their scale exemplifies the development of services sector in towns

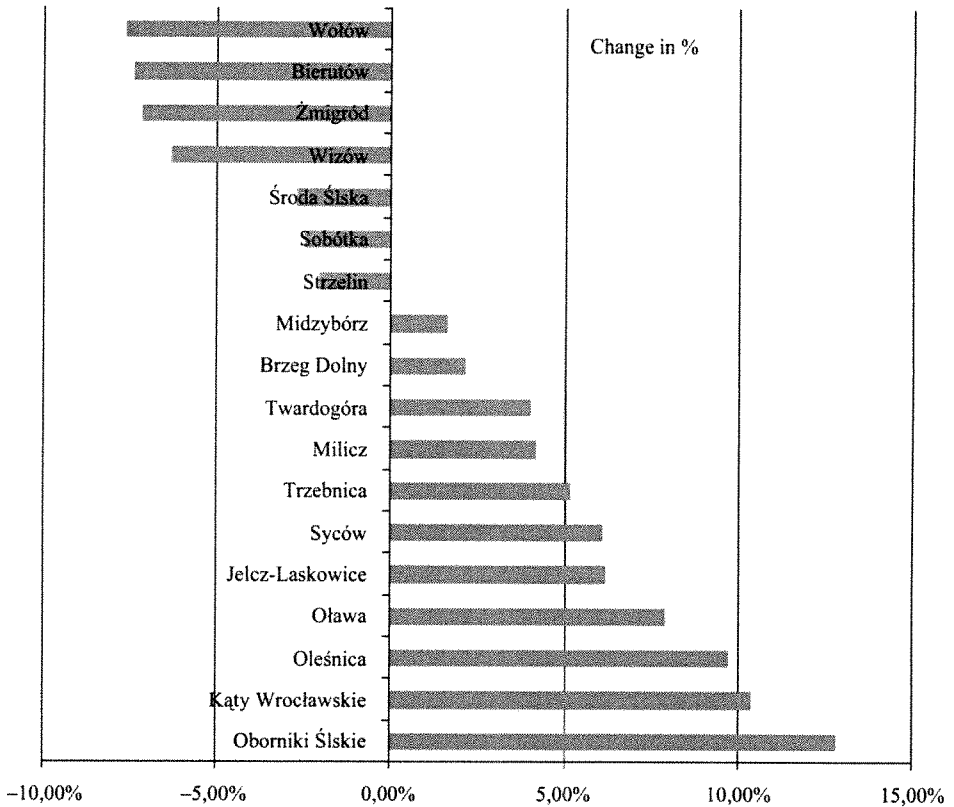


Fig. 3. The change in the number of population in gminas belonging to WrMA in the years 1995–2008

Source: Developed by author based on data from Central Statistical Office

and the occurrence of their own zone of influence. The values of all parameters have been ranked and the respective rank values have been summed up.

In the ranking method the six enumerated constituents were used as the stimuli (the sum of ranks – Table 2). The towns which were considered in the analysis can be divided into groups taking into account the criterion of distance from Wrocław. To the first group belong small towns, strictly connected with Wrocław, located in its vicinity and which are under no influence of any other big city. There are as following: Kąty Wrocławskie, Środa Śląska, Brzeg Dolny, Sobótka, Oborniki Śląskie, Trzebnica, Jelcz-Laskowice, Siechnice, Strzelin, and Wiązów (Bagiński, 1993: 13; Masztalski, 2005: 107). For those towns the name ‘surrounding of Wrocław’ was adopted (Litwińska, 2007: 133). The rest of the towns of WrMA lie more than 30 kilometers away from the centre. The positive migration balance and intensively developing building industry can

indicate the development of residential function. In the vicinity of big cities there are formed satellite towns which constitute the subsidiaries of the central city. This phenomenon can be analyzed by observing the size of the population inflow and the migration balance. When observing the size of the migration balance in the analyzed cities in 2008 we can see that the positive balance refers mainly to Wrocław (183 people) and the towns from its neighbourhood, i.e., Kąty Wrocławskie (69), Oborniki Śląskie (51), and Środa Śląska (48). Among the towns more than 40 kilometers away from Wrocław the positive migration balance occurred in Wołów (54). In the conversion of the migration balance for 1,000 citizens the first place belongs to Kąty Wrocławskie, then Wążów and Oborniki Śląskie with Środa Śląska and Wołów. In most of the towns the migration balance was negative in 2008. The worst situation was in Międzybórz

Table 2. Socio-economic indicators in towns of WrMA in 2008 – ranking method

Gminas	Ranks						The sum of ranks
	I	II	III	IV	V	VI	
Środa Śląska	6	4	3	13	10	1	37
Kąty Wrocławskie	1	1	1	16	8	11	38
Trzebnica	5	7	9	5	11	3	40
Oborniki Śląskie	2	3	16	3	6	13	43
Wołów	9	5	10	18	2	4	48
Strzelin	8	9	13	11	5	2	48
Wrocław	14	8	5	1	3	18	49
Jelcz-Laskowice	7	13	4	8	12	10	54
Oława	13	12	8	6	16	8	63
Wążów	3	2	18	20	9	15	67
Międzybórz	10	21	2	14	14	6	67
Oleśnica	11	11	14	2	17	19	74
Sobótka	4	6	20	15	19	12	76
Milicz	12	18	12	7	20	9	78
Siechnice	21	10	6	21	1	21	80
Syców	20	19	15	4	18	5	81
Żmigród	16	14	21	17	7	7	82
Twardogóra	15	16	11	12	15	14	83
Brzeg Dolny	17	17	7	9	13	20	83
Prusice	18	20	19	10	4	16	87
Bierutów	19	15	17	19	21	17	108

Explanation: I – influence per 1,000 residents; II – migration balance per 1,000 residents; III – percentage of working people in relation to the number of working age population; IV – number of entities of national economy per 1,000 residents; V – number of residential buildings completed per 1,000 residents; VI – number of shops per 1,000 residents

Source: Developed by author based on data from Central Statistical Office

(−7.21 per 1,000 residents), Prusice (−7.13), Syców (−6.40), and Milicz (−6.30). The negative migration balance was also observed in several towns from the area surrounding Wrocław, i.e., in Brzeg Dolny (−3.75), Jelcz-Laskowice (−1.69), Siechnice (−0.26), and Strzelin (−0.08).

In some towns together with the negative migration balance the decrease of the number of entities of national economy recorded in REGON (Krajowy Rejestr Urzędowy Podmiotów Gospodarki Narodowej, National Official Business Register) occurred, counting per 1,000 residents. This type of situation was present in Milicz and Bierutów. The decrease of the number of entities of national economy occurred also in Trzebnica and Wołów. In Milicz and Bierutów also the situation of the residential building does not present the best. Number of residential buildings completed per 1,000 inhabitants places them at the end of the list of analyzed towns.

SUMMARY

On the basis of the conducted analysis it is apparent that some of the towns cannot attract new citizens and potential investors, as well as new housing investments in their area. The evidence of this situation is seen on the exemplary indicator of migration balance per 1,000 residents. The population inflow connected with the development of building industry can be observed in Wołów, where the number of entities of national economy decreased, but the number of population and the number of residential building completed increased. Good economic situation in building industry occurred in Siechnice, Strzelin and Oborniki Śląskie. The comparison of the analyzed indicator values shows that there was increase of the most of analyzed indicators, although their level was diversified. There are noted better conditions in towns which are located in the closest surrounding of Wrocław. A kind of interdependence is present here: the possibilities of development depend on the location in the communication network and influence of the neighbourhood of a big city.

Small and medium towns which are in the zone of interdependence of a big regional city such as Wrocław are distinguishable by large diversity in the scope of socio-economic activity. Most of them have problems with gaining new residents and potential investors. Despite some dangers coming from dynamically developing labour market in Wrocław, some of the small towns develop independently. In the Wrocław Metropolitan Area to such towns belong Kąty Wrocławskie (Zuzańska-Żyśko, 2007) and Jelcz-Laskowice (3). For towns situated in the zone of interdependence of big agglomerations the chance is in the development of functions which are not present in a big city or which cannot be

established by such a city. Such functions are as following: sport and recreation, relax, tourism, and residential function. Some towns in the surrounding of Wrocław have developed furniture industry and the best example is Międzybórz. Among the analyzed towns big possibilities of development of tourism there are in Wołów (big acreage of forests, i.e., Park Krajobrazowy Doliny Jezierzycy, Landscape Park of Jezierzycy Valley) (Chądzyńska, 2005/2006) and Oborniki Śląskie (as large areas of forests and microclimate). There is not observed a very good situation in Milicz and Bierutów, where the decrease of most of the indicators was registered.

Taking into account a synthetic approach to all analyzed indicators (Table 2), the best conditions for inhabitants and investors are in towns near Wrocław such as Kąty Wrocławskie, Środa Śląska, Oborniki Śląskie, Trzebnica, Strzelin, and Wołów located 43 kilometers away from Wrocław. The weakest towns according to the analysis are Bierutów, Prusice and Brzeg Dolny.

The undertaking of actions which lead to the sustaining of existing ones with the elimination of harmful effects on the environment and the implementation of new functions, all of these give the chance of development with the usage of accessible values, which can be a possibility of development for towns that have not formed their own profile.

NOTES

- (1) The list of conventional signs in the Fig. 1: grey colour – urban gmina, spotted colour – rural gmina, dark spotted colour – town in the urban-rural gmina, bright lined colour – rural district in the urban-rural gmina.
- (2) The list of conventional signs in Fig. 2: bright spotted colour – rural gminas, dark grey – small towns, dark spotted colours – urban gminas, dark-light colour – the surrounding of Wrocław, white-lined – the remaining gminas.
- (3) Those two cities occur also when analyzing broader area such as Dolnośląskie voivodship or the area of Poland.

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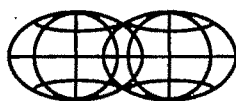
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TOMASZ CHABERKO, ANNA FEDIRKO, PAWEŁ KRETOWICZ

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SOCIAL AND SPATIAL DIMENSIONS OF DEMOGRAPHIC PROCESSES IN BEIJING MUNICIPALITY AT THE TURN OF THE 21ST CENTURY

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ABSTRACT. This study focuses on the demographic processes in Beijing Municipality at the turn of the 21st century and attempts to evaluate a role of China's social policies upon contemporary population changes. Two main determinants influencing present demographic characteristics were taken into consideration: the immigration of temporary workers and one-child policy. Socio-economic processes in Beijing are accompanied by the rapid changes of urban physiognomy as a result of immense city development (new industrial and residential areas) and new investments prepared for the 2008 Olympics. A spatial typology of socio-demographic changes between 1997 and 2007 was created in order to distinguish areas of different demographic and social development. Concluding remarks of this study highlight main characteristics and determinants of Beijing Municipality demographic features and a pace of their changes. Evidences typically found in Beijing clearly show a crucial role of market economy elements which have a great effect upon socio-spatial urban expansion.

KEY WORDS: China, Beijing Municipality, demographic processes, one-child policy, floating population.

INTRODUCTION

China's population has grown rapidly during the second half of the 20th and the first decade of the 21st century from 594.4 million in 1953 to 1,334.7 million in 2009. Currently, 46.6% of China's population resides in cities. The major political and economic reforms ushered in during 1979 brought fundamental socio-demographic changes, modifying age and sex structure, altering family model, and increasing overall mobility. The crucial restriction of the former is the one-child policy, which is now influencing the second generation, whereas the latter is determined by the household registration system (*hukou*) which controls

migrations to the largest cities. The most important economic policies introduced the principal elements of a free market. As a result, the chance to start private businesses caused many enterprises to emerge throughout the country. However, basic rights such as land or apartment ownership are still restricted. The social and demographic changes of 1979 were accompanied by the dynamic development of the urban landscape. The same reforms prompted rampant creation of economic zones – vast areas of intensive development encompassing sizeable parts of cities. Currently, their expansion is one of a few dominant economic factors which alter the entire urban physiognomy.

The main goal of this study is to determine and analyze the demographic changes of Beijing Municipality, which result from dynamic city growth, socio-political reforms and tercialization of the economy. Simultaneously, an attempt is made to illustrate the contemporary social consequences of demographic disparities within the research area. The study setting includes Beijing Municipality, which consists of 18 administrative units within the inner city and suburban areas of Beijing, along with the adjoining rural hinterlands. Beijing, as the capital city and China's third biggest municipality (after Shanghai and Chongqing), was most influenced by the transformation processes. Beijing is also recognized as a political, educational, and cultural centre of the entire country and as a touristic destination worldwide. Moreover, in the year 2000, Beijing started preparations for the 2008 Summer Olympic Games, which acted as another boost for intensive urban development. The significance of Beijing, together with the scope of its changes, provides a good example of those general socio-demographic trends with explicit Chinese characteristics.

THE MUNICIPALITY OF BEIJING

As many as four of all the cities in China are directly controlled by the Central Government and possess a status equivalent to Chinese provinces: Beijing (16,801 km²/16.33 million inhabitants in 2007), Tianjin (11,305 km²/10.43 million), Shanghai (6,341 km²/18.88 million), and Chongqing (82,300 km²/31.44 million). These administrative units encompass massive urban and rural areas, a huge number of citizens, and form a separate category of Chinese cities significantly different from and incomparable to other large cities, e.g., the city of Guangzhou with over 7 million population, the capital of Guangdong Province. Such directly-controlled municipalities are the highest level of classification for cities used by the People's Republic of China. Their area includes a number of smaller units, such as suburban counties with towns, townships and villages as in the Beijing Municipality (Fig. 1).

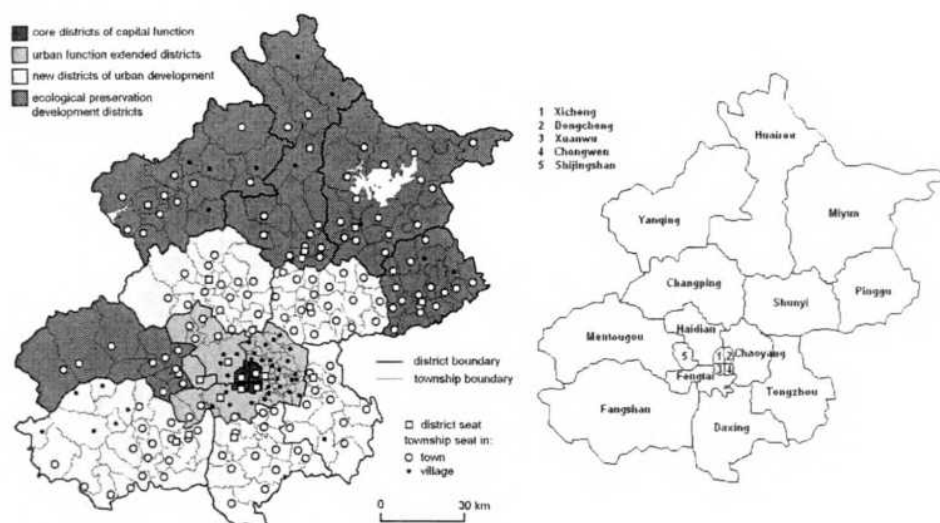


Fig. 1. Administrative division of Beijing Municipality in 2007

Source: Authors' own work based on Beijing's Statistical Yearbooks

The Beijing municipal government administers 18 urban, suburban and semi-urban districts. Four inner-city districts (Xicheng, Dongcheng, Chongwen, and Xuanwu) cover 62 km² with a total population of over 1.8 million. Originally, Beijing was comprised of an area surrounded by city walls during the Ming and Qing dynasties (Beijing's city walls were destroyed during the Cultural Revolution). Presently, this area is considered the strict city centre. Four outer city districts (Haidian, Chaoyang, Fengtai, and Shijingshan) were the major areas of widespread urban development during the second half of the 20th century. Eight inner and outer districts together constitute the metropolitan area of Beijing. Outside this area another five inner suburban districts (Daxing, Tongzhou, Shunyi, Mentougou, and Changping) and five outer suburban districts (Fangshan, Pinggu, Huairou, Miyun, and Yanqing) are distinguished. Subsequently, all of these districts are divided into smaller units totalling 36 towns, 253 townships, 4,432 village committees, 3,753 residents' committees, and 101 neighbourhood committees forming the Beijing Municipality (www.ebeijing.gov.cn).

The large number of towns is a consequence of the policy of the Beijing Municipal Government, which initiated a 'dispersed polycentric urban development plan' in 1958, subsequently revised in 1983 and 1993. This plan was created to demarcate a city core and some scattered satellite cities and towns around it (Zhou, Mong, 2000; Chen et al., 2002). The newest 'Master Plan of Beijing City (2004–2020)' continues this dispersion policy ('two axes,

two belts and poly-centres'). Particularly, this plan concentrates on polycentric expansion as an alternative for the present monocentric urban expansion. Hence, special attention is paid to public transportation networks and their connections with peripheral residential areas, as extensions to the transportation system are believed to disperse the population away from the overpopulated city core. This outflow was first triggered by the demolitions of the traditional yet sub-standard housing called *hutongs*.

The metropolitan part of Beijing Municipality (eight inner-city districts – 1,368 km²) is inhabited by 10.26 million people (62.8% of the total population). The urbanization intensity (as measured by the proportion of the population residing in the metropolitan area and towns) in Beijing Municipality reached 82.32% in 2007 whereas it was only 73.48% in 1990. From this indicator of growth, the total urbanized area is projected to expand from 395.4 km² in 1990 to 1,088 km² in 2010 (Ma et al., 2008). Moreover, the city of Beijing has experienced suburbanization processes widely reported in other studies (Zhou, 1995; Wang, Zhou, 1999). This is evidenced by a strong decrease of population in all four core districts while suburban areas have gained up to 2.5 million citizens during 1982–2000 (National Bureau of Statistics of China). Chinese suburbanization has been hindered mainly by the continuously low number of cars per population and the simultaneously high utilization of public transportation and bikes (Zhou, Ma, 2000). Unlike in western societies, suburbanization in Beijing has not lead to segregation within the suburban districts, regardless of the vast number of floaters coming into the city during the last few decades (Zhou, Logan, 2006).

DEMOGRAPHIC CHANGES IN THE LIGHT OF CHINA'S SOCIAL POLICIES

The Household Registration System, a policy of controlling the geographic movement of people in China widely known as *hukou*, was put into practice in 1958. It is a very powerful state policy, which controls migrations between rural and urban areas. Every person in China is registered in a household registration book which classifies all the citizens as either urban or rural. The great majority of China's population, who resides in rural areas and hold rural *hukou*, is not entitled to such privileges as: subsidized housing, social insurances, medical care or employment in the city (as opposed to urban citizens). This set of *hukou* policies effectively controlled migrations within China's planned economy until the introduction of economic reforms in the late 1970s, when the *hukou* rules were relaxed in response to a rapidly growing demand for manpower in cities. Millions of workers, who in the past were inefficiently employed in agriculture, were able to move to cities and work mainly in construction, manufacturing or

household services. The annual population surveys conducted since 1996 have collected data on floaters residing away from their household registration location for 6 months or longer. The data captures those who have crossed township, town or even district borders (Goodkind, West, 2002).

Before the reforms, all Chinese peasants were part of the 'production collective' and no one was allowed to leave the collective without permission, which was very rarely issued. In 1984, the Central Government permitted the rural population to float into small towns. Economic reforms and relaxation of *hukou* policies started multimillion migrations of peasants towards city centres. Since the 1980s, China has been experiencing 'tidal waves' (Roberts, 1997) of rural migrants to cities. The number of migrant labourers in the entire country in 1997 was reported to be 80 million by the Office of the Leading Group of the Census of the Floating Population in Beijing and 130 million in 2005 by Ministry of Public Security, but it is entirely possible that this number is higher in actuality. Fig. 2 presents the population growth in the city of Beijing.

Currently, the large surplus of the agricultural labour force, which mainly consists of male workers, is absorbed in poorly paid jobs in the industrial and service sectors of big cities such as Beijing. These rural labourers are almost always classified as temporary urban migrants, as the relaxed *hukou* system still continues to prevent migrants from changing residency. Official changes in *hukou* statuses are extremely complicated and rare.

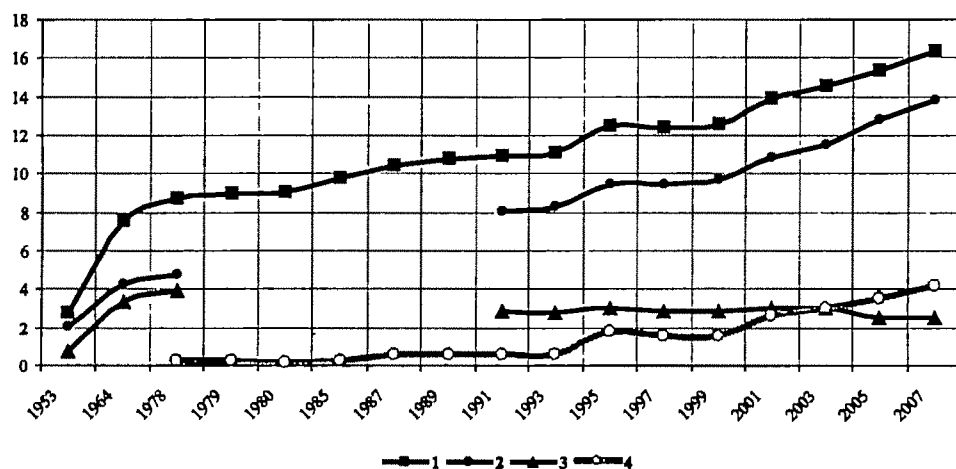


Fig. 2. Population growth in Beijing between 1953 and 2007 (temporary population is either urban or rural, total population is a sum of urban and rural population)

Explanation: 1 – total; 2 – urban; 3 – rural; 4 – temporary

Source: Authors' own work based on Beijing's Statistical Yearbooks

The number of the floating population in Beijing was reported to be as high as 2.9 million by the 1997 Census of Beijing's Floating Population, excluding any outfloaters (Poston, Duan, 1999). Nonetheless, public running records show a lower number of temporary residents, so such figures should be considered with caution. The rapid increase in the total population of Beijing since the early 1980s occurred mainly as a consequence of the immigrants, who floated in from rural areas all over the country. The number of these people, often classified as temporary urban citizens, leapfrogged the rural population in 2003 and still continues to grow at a very high pace. The number of China's rural population has decreased considerably since 2003 and currently remains at slightly over 2 million inhabitants. Thus, irrespective of the great diversity of land-use in Beijing Municipality, the urbanization rate as measured by official data amounts is very high. Presently, over 4 million people of Beijing Municipality's total population are temporary migrants, who started coming particularly after 2000, prompted by the job opportunities generated by the prospective Olympics investments. This phenomenon has fostered urban sprawl greatly as such immigrants tend to float not only into the inner suburban areas of Beijing Municipality, but also to the outer suburbs (Fig. 3).

In 1997, floaters tended to concentrate primarily in the suburban areas adjoining inner-city districts, especially in Fengtai, where their share exceeded 20%. Seeking jobs and life opportunities, migrants clustered in the districts adjoining the inner city, although they did not reside in separate enclaves, but were distributed in a more mosaic way, mingling with the permanent population.

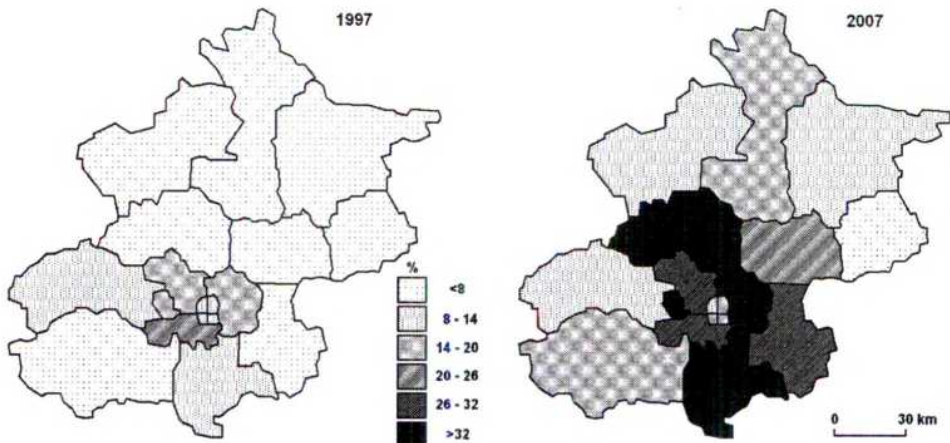


Fig. 3. The share of temporary immigrants in Beijing Municipality in 1997 and 2007

Source: Authors' own work based on Beijing's Statistical Yearbooks

The rural areas of Beijing Municipality have not experienced a vast influx of floaters, where their share has not exceeded 8% of the local population. In 2007, the overall spatial configuration of the migrants' number persisted, but their size changed more than doubled. As in 1997, there was a low floater inflow to inner-city districts, but their overall number tripled in the so-called new districts of urban development which are not adjacent to the inner city. In districts such as Changqing and Daxing, more than one third of their current population comprised temporary migrants. Although these areas are located relatively far from the city centre, rapid development of the public transportation system and expansion of developed areas provide new job opportunities and access to the necessary public amenities for many citizens. Furthermore, expensive apartments, the growing attractiveness of inner-city areas, and high living costs have further hindered the inflow of floaters. Presently, the city of Beijing has a propensity to spread eastwards as areas located to the west mostly cover mountains and thus were classified as ecological preservation lands. The share of floaters has not increased there for the last 10 years.

Another significant characteristic of the Chinese population is the one-child policy introduced in 1979 by Deng Xiaoping in order to limit population growth. This population control policy limits the number of children to one per married couple in urban areas. Although it was introduced as a temporary measure, it still continues thirty years after its establishment. As a result, a number of punishments were levelled, including fines, abortions and forced sterilization in cases of second or more pregnancies (Hardee et al., 2004). This policy has dramatically altered family sizes in Beijing Municipality. This phenomenon is well-evidenced by spatial disparities in Beijing Municipality's districts, depicted in Fig. 4. The data utilized was extracted from a 1% sample population survey.

Generally, about 70% of all households in Beijing Municipality consist of no more than three persons. This share varies across the districts from 34% in suburban areas with high share of floaters (Daxing) to 81% in the strict city centre (Dongcheng). City core districts possess the highest proportion of one person households (above 10%), which results from the age structure (population ageing fosters single living) as well as modern and independent lifestyles. These phenomena are consistent with European trends, where ageing and depopulating city centres are the most prominent characteristics of market economy countries. Nonetheless, most of Beijing's districts retain a high share of three person households (nine districts with more than 40%). These households are mainly located within the city centre and suburban areas, as the single-child policy is aimed at the citizens with urban *hukou*. Hence, rural districts are distinguished by larger average household sizes and a significantly higher share of households with more than four members. It is essential to add that rural couples in China

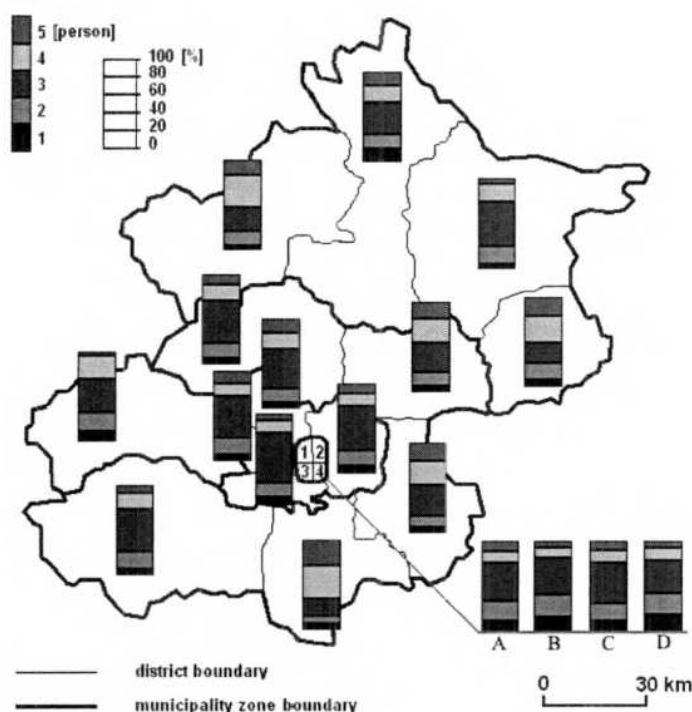


Fig. 4. The share of households in Beijing's districts in 2003 (by size)

Explanation: A – Xicheng; B – Dongcheng; C – Xuanwu; D – Chongwen

Source: Authors' own work based on Beijing's Statistical Yearbooks

are allowed to have a second child after 5 years, but in many cases it applies only when the first child is a girl (Hesketh et al., 2005).

China's one-child policy has always been restricted to ethnic Han Chinese living in urban areas. The policy allows exceptions for some cases, including rural couples, ethnic minorities, and, in some special areas like Beijing, parents without any siblings who can have a second child four years after the first offspring. The newest amendment to the policy allows Beijing residents to have a second child regardless of whether or not their spouse has siblings (Zhao, 2010). The one-child policy has been estimated to have reduced China's population growth by as much as 300 million people over the first twenty years after its introduction. However, this restrictive policy has created a disdain for female infants; abortion, neglect, abandonment, and even infanticide have not been uncommon in the case of female infants (Wu et al., 2003). This phenomenon of 'missing girls' has turned China into a magnet for human traffickers, who lure or kidnap women and sell them into forced marriages or the commercial sex trade.

SPATIAL DISTRIBUTION OF DEMOGRAPHIC CHANGES IN 1997–2007

Population increase and city growth in Beijing Municipality have tended to sprawl spatially throughout the recent years. This is evidenced by administrative zone alterations as well as influxes of floaters into land further from the city centre. Such incremental spatial development makes it difficult to delineate boundaries between urban, suburban and rural areas. As Qu Lei (2007: 5) indicates, Beijing's periphery is a place of 'various socio-economic activities reflected mostly by the coexistence of formal and informal settlements'. Moreover, immigrants have a tendency to settle in low-standard housing often located in the outer suburbs, as shown in the previous sections of this paper. From a geographical perspective, it is very interesting to discover how such immense city development is mirrored by the spatial distribution of demographic processes over the study area. In order to trace the pace of these demographic changes, a dynamic spatial typology was constructed using a set of socio-demographic variables concerning shares of population with urban/rural *hukou*, population density, children and elderly dependency rates, feminization rate, shares of temporary migrants, birth and death rates, and household size. Utilizing Ward's grouping method, six types of socio-demographic development in 1997–2007 were obtained, as shown in Fig. 5.

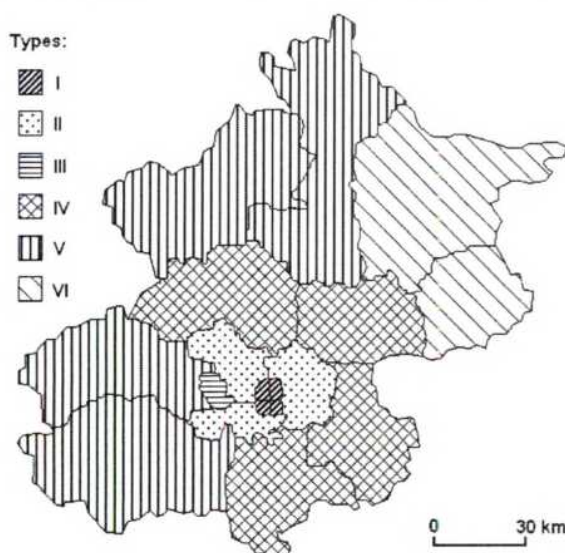


Fig. 5. The spatial typology of socio-demographic changes in Beijing's Municipality districts in 1997–2007

Source: Authors' own work based on Beijing's Statistical Yearbooks

Type I – depopulating inner-city districts – this type encompasses four districts in Beijing's historical centre. There are no people with rural *hukou* classification residing in this area. Depopulation processes have been the most prominent demographic feature in this area for the last 10 years. This is evidenced by a decreasing population density (from 31.5 thousand persons per 1 km² in 1997 to 28.5 thousand persons per 1 km² in 2007). Moreover, although Type I districts possess the oldest population in the whole of Beijing Municipality, the pace of ageing has slowed down. Unlike in other parts of the city, the average household size here remains high and stable (2.8 persons). In inner-city districts there are now slightly more women than men (101 women per 100 men), a difference which has been caused by both ageing and increasing employment in the service sector. Finally, the share of floaters in this area is rising at a very slow rate and stays the lowest among all of the presented types.

Type II – districts of residential suburbanization – this type includes another four districts which were greatly affected by the recent suburbanization processes. The increase in population density has almost doubled in the recent 10 years, i.e., in Haidian the population density grew from 4 thousand persons per 1 km² in 1997 to 7 thousand persons per 1 km² in 2007. Such population growth is also a consequence of new, high-tech industrial investments. For example, the Zhongguanchun area in the Haidian district was designated to be 'China's Silicon Valley', and as such, the Chinese government invested tremendous effort and resources in the creation and development of knowledge-oriented industries and services (Ding, 2004). Suburbanization is accompanied by the highest population ageing (4.4% increase in elderly dependency rate), which indicates that people mostly from older age groups move to the suburbs. What is more, there is also a sizeable influx of temporary migrants, especially those who are more affluent, who then strive to acquire urban *hukou*.

Type III – industrial district of urban development – this type is comprised of only one district (Shijingshan), which has significantly different socio-demographic characteristics than all of the other types because of its industrial function. In 1919, a giant steel factory in Shijingshan (Shougang industrial complex) was erected and is now the third largest steel producer in China and employs a total of about 70,000 workers. Therefore, the Shijingshan district is distinguished by the highest male to female ratio – 108.4 men per 100 women in 2007, actually a drop from 1997, when the ratio was 112.1 men per 100 women. The share of residents with rural *hukou* decreased to zero because suburbanization processes and floater inflow affected this area simultaneously. Hence, the child dependency rate decreased only a little as compared to in other area types.

Type IV – floaters catchment districts – this type includes four districts located quite far from the city core. Although this type does not possess the

highest share of temporary immigrants, they have floated into those areas rapidly during the last decade. Daxing district is the best example of this, with nearly a 9% population of floaters dwelling in the area in 1997, which grew to 37% ten years later. Temporary immigrants coexist with rural inhabitants, although the latter group is shrinking. In some areas, population changes are fostered by the de-concentration of industries, new high-tech investments and the simultaneous expansion of transportation links. Incomers are usually young, male workers, often single; thus, this area type is also illustrated by a decline in mortality and elderly dependency rates. Additionally, these floater catchment districts have also experienced the largest decrease in child dependency rates (almost 15 percentage points decrease).

Type V – semi-urban districts with ecological preservation areas – a vast majority of the population residing in the districts of this area type is rural, except for the Mentougou district – a large ecological preservation area and recreational centre for Beijing. The Huairou district also serves a touristic function, as it is a frequently visited Great Wall touristic destination. The decrease of rural inhabitants is noticeable in all of the districts of this area type, yet it is not as high as elsewhere. The population density in this area increased only a little, as the share of immigrants has not exceeded 15%, with only a slightly elevated rate of inflow during last decade. However, the average household size dropped significantly (from 3 persons to 2.5 for rural population and from 2.5 to 2.1 for urban population in 1997–2007) as a result of the modern family model, since this area type converges with the more urban areas.

Type VI – peripheral districts with declining rural population – only two districts are included in this type, and are located northeast of Beijing's centre. These districts have experienced the largest loss of inhabitants with rural *hukou* (in the Miyun district there was a drop from almost 80% in 1997 to 62.2% in 2007). Nonetheless, the current share of rural dwellers remains high, what allows for the assumption that these districts still possess rather high, but diminishing agricultural potential. Migration flows in this area type occur mainly in the towns or districts seats. Similarly to the previous type, the rate of increase in the total number of floaters has been very slow, with a total share of floaters at no more than 8%. A high growth rate of urban citizens has affected the fertility rate – a very high birth rate in 1997 (more than 1%) dropped to 0.8% in 2007. Accordingly, a slight increase in the overall mortality was noticed that did not happen in other area types. As in the rest of Beijing Municipality, the average household size in Type VI areas has decreased significantly during the examined period.

To recap, some socio-demographic changes observed in the city of Beijing during last decades correspond to similar processes well-known from Western Europe and the USA. Nevertheless, a few distinctive and typically Chinese

characteristics could be found in Beijing and other cities in Eastern Asia. First and foremost, Chinese cities still remain in the urbanization stage – they grow persistently due to immense inflow of rural dwellers prompted by unabated industrialization. This population increase has shifted from the inner-city districts to the outer districts. Secondly, suburbanization processes in China have not acquired as high pace as these in western countries. This means that many Chinese families still cannot afford their own house allowing for uncontrollable immigration to settle in further from the city core. On the contrary, areas of this value in the USA have been constantly occupied by single-house estates since early 1950s. Thirdly, Beijing city centre remains a prestigious and reputable area, which is consistently regarded as an attractive place to live. Accordingly, no significant immigrant inflows occur in the inner city, which, in turn, is very characteristic for central districts in American cities. From this perspective, Chinese city centres are similar to European example. Fourthly, Chinese traditional residential development – *hutong* – is unheard of in Europe and America. These substandard housing estates are currently being renovated and modernized in most Chinese cities. This advancement takes place on an enormous scale and sometimes results in complete reconstructions turning small dilapidated buildings into high-status estates.

CONCLUSIONS

This study illustrates the contemporary population changes in Beijing Municipality with a special regard to state social policies as a background for numerous socio-demographic variations within and between districts of Beijing. A high significance of governmental reforms along with social restrictions imposed in the past is a very strong determinant of most changes within the study area. As a whole, the transition from a planned economy to a free market economy is the greatest effect of these reforms. The pace of this transformation is astonishing. For example as shown in Fig. 6, in Beijing Municipality in 1978, almost 30% of the total population was employed in the agricultural sector. In 2007, this number dropped to 7%, but the service sector jumped to almost 70% of the municipality's total employment.

The relaxation of the *hukou* household registration system also gave a boost to an unusually large inflow of temporary workers, which is believed to be the highest economic migration worldwide that has occurred during such a short time period. The one-child policy, in turn, limited the number of children born, especially in the urban areas. As a result, Beijing inner-city districts still display a negative natural increase, whereas families in semi-urban and rural districts tend

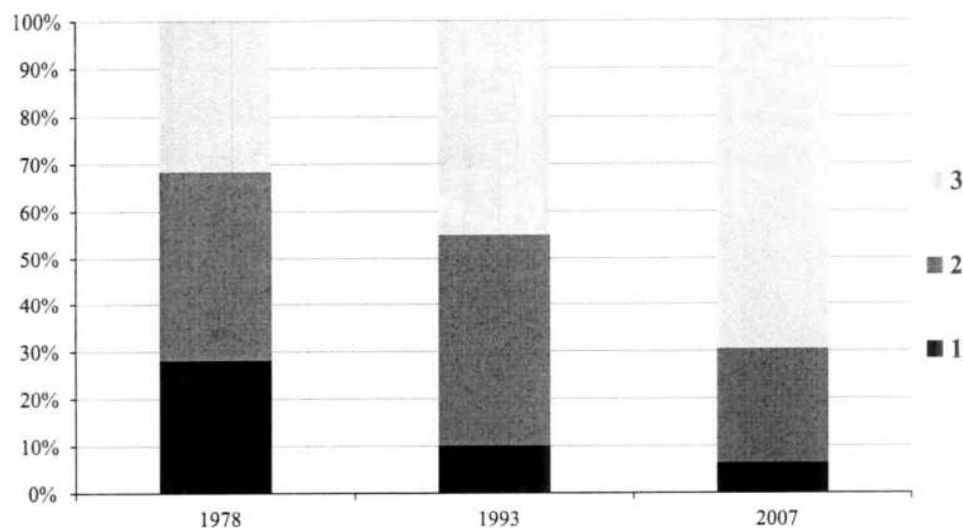


Fig. 6. Employment in three sectors in Beijing Municipality between 1978 and 2007
 Explanation: 1 – sector I; 2 – sector II; 3 – sector III

Source: Authors' own work based on Beijing's Statistical Yearbooks

to have more than one child. Negative natural increase, though, is not the only reason for depopulation in the city core. A lack of free land, dispersion policies and increasing costs of living efficiently reduced the population density in the four inner-city districts. On the other hand, the relaxation of one-child policy has caused an increase in the overall fertility in the core city districts, and decreased the fertility in the districts located further outward. Hence, many households of semi-urban areas sometimes consist of four members or more. The immigration of a temporary population has significantly changed the demographic structure of many districts in accordance with the floaters' characteristics. As other researchers imply, floaters are usually young people, males, often singles, who settle in catchment districts which then become less feminized and younger. These people are usually lured by job opportunities, e.g., in the high-tech industries but were also prompted by the investments accompanying the 2008 Olympics. The inner suburbs became more affluent as a result of suburbanization, however, the high share of a temporary population attests to the phenomenon of coexistence between the temporary workers and the permanent population. However, there are very few floaters who managed to build and/or obtain their own apartments and increase their standard of living. These processes do not indicate that the floating population finds it easy to live in Beijing; rather, a lot of these people just increase the ranks of the urban lower class. Finally, the semi-urban and rural areas

experienced a rapid decrease in population members holding rural *hukou*. In spite of the migration of rural dwellers to towns, a positive natural increase augments the overall population of the peripheral districts. In short, a vast expansion of the city also affects the outlying areas, changing Beijing Municipality into an expansive metropolitan area.

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GYÖRGY CSOMÓS

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ANALYSIS OF LEADING CITIES IN CENTRAL EUROPE: CONTROL OF REGIONAL ECONOMY

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ABSTRACT. Nowadays, one of the characteristic orientations in social science studies focusing on cities is the ranking of cities, as well as the definition of the world's leading cities (world cities, global cities) on the basis of various criteria. Central European countries are given just a minor role in these researches, particularly in comparison with German cities with their considerable economic performance. This analysis compares the large cities of Austria, Germany and the countries of the Visegrád Group in terms of their role in economic leadership. To this end, the characteristic parameters have been examined: the GDP in purchasing power standards and nominal GDP of the cities, the revenues of large companies found in these cities, as well as the domestic market capitalization of the stock exchanges.

KEY WORDS: Central Europe, Visegrád Group, city rank, world cities, economic control, transnational corporations, stock exchange.

INTRODUCTION

One of the mainstream directions of social studies focusing on cities is the ranking and categorization of cities in view of varied criteria. According to Beaverstock et al. (1999), these ranks are based on two different approaches: the functional approach examines the cities as non-independent units, but parts of a comprehensive socio-economic system, whereas the demographic approach considers the size of the cities to be a determining factor. The associated literature (Sassen, 1991; Beaverstock et al., 1999; Taylor, 2004) tends to call cities ranked on the basis of the functional approach *world cities* or *global cities*, while cities ranked with reliance on the demographic approach are described as *megacities*. There is a sharp contrast between the two types. To illustrate this: Karachi

(Pakistan) with its population over 13 million is obviously a megacity, but not a world city, whereas Frankfurt (Germany), where the number of inhabitants is under 700 thousand, is one of the dominant financial centres of the world, and therefore is considered to be a world city, but not a megacity. Only four or five of European cities can be regarded to be megacities, first and foremost Paris, London, Moscow, and Istanbul with their individual population of approximately 10 million. On the other hand, the definition of megacities is not applicable to the cities of the Central European countries – nor to German cities – yet some of the cities in the region belongs to various groups of world cities. Quite obviously, the associated literature defines world cities on the basis of highly differing characteristics, and thus the categorization of cities changes almost from author to author. For the purpose of our analysis, it is important to clarify the terms *world city* and *global city*, as well as the scope of application of these definitions.

Nevertheless, most authors mention Central European cities just marginally. According to Friedmann (1995), Taylor (2004) and Sassen (2006), the capitals of the Visegrád Group are in fact the most significant headquarter cities of western (e.g., German or Austrian) companies involved in business operations in Eastern Europe, they are the so-called gateway cities. Some of the works conclude that the large cities of the region – especially Budapest, Prague, and Warsaw – do not have sufficient economic weight, and therefore their role in economic leadership is rather insignificant.

This study compares some of the characteristic economic parameters of large cities in Central European countries (Austria, Czech Republic, Germany, Hungary, Poland, and Slovakia). We aim to answer the question which the dominant cities of regional economic leadership are, and in the given economic system, what role is taken by the cities of the Visegrád Group.

POSITION OF CENTRAL EUROPEAN CITIES AMONG WORLD CITIES

The definition of the world city was coined by Geddes (1915) at the beginning of the last century, and then the definition was further explained in the work of Hall (1966), Hymer (1972), and Heenan (1977). In parallel with the economic growth of the developed world, the second half of the 20th century witnessed a booming increase in the number of multinational companies, while their role in economic leadership came to encompass the whole world. In this period, city-related studies defined world cities basically on the basis of the number of MNC (Multinational Company) headquarters present. The works of Hall (1966) and Hymer (1972), however, also suggest that MNCs representing economic leadership act in close cooperation with the centres of governmental decision-making. The underlying

interrelations – especially in Europe – resulted in the dynamic growth of capitals, e.g., London, Paris, Moscow. The only notable exception was Germany, where instead of Berlin, divided by fissures of political ideology, a traditionally industrial area, the Rhine-Ruhr region took economic leadership. Among other reasons, for the lack of MNCs large cities of the Central European countries – certainly, with the exception of Germany and Austria – were still not included in these works. According to Hall (1966), the only large city of the former Socialist countries to be deemed as a world city was Moscow, but in contrast with the large cities of the West not for its economic functions, but political weight.

After the change of the political regime, economic systems of the Eastern and Central European countries witnessed substantial changes. The conversion to market economy and privatization resulted in economic environments that made the large cities of the region appraisable not only in Europe, but on global scale, as well. One of today's key pieces of literature, Sassen's (1991) *The Global City* categorizes large cities with respect to the concentration and intensity of advanced producer services. Global economy – with respect primarily to the characteristics of producer services – is topped by cities like New York, London, and Tokyo, as well as Paris and Frankfurt. According to Sassen (1991), in the early 1990s economy in the countries of the Eastern and Central European region saw a tide of foreign working capital investments that were primarily implemented in capitals featuring more developed infrastructure, such as Budapest, Prague, and Warsaw. Ivanička Sr. and Ivanička Jr. (2007) state that the most important bases for western companies wishing to expand their operations in the region were Prague, Warsaw, and Budapest, and as a consequence the cities became the centres of regional economic leadership. Globalization and World City Network's (GaWC) study published in 1999 clearly reflects the increasing economic

Table 1. Rank of Central European cities by different services according to the GaWC

Category	A	B	C	D
Prime	Düsseldorf, Frankfurt	–	Frankfurt	–
Major	Berlin, Cologne, Hamburg, Munich, Stuttgart	Düsseldorf, Frankfurt, Prague, Vienna	Prague, Warsaw	Berlin, Budapest, Frankfurt, Prague, Warsaw
Minor	Dresden	Budapest, Hamburg, Warsaw	Bratislava, Budapest, Munich, Vienna	Bratislava, Düsseldorf, Hamburg, Munich

Explanation: A – global accountancy service centres; B – global advertising service centres; C – global banking service centres; D – global legal service centres

Source: Beaverstock et al., 1999

significance of the large cities of Eastern and Central Europe (Beaverstock et al., 1999). In the light of the categorization made in view of four distinct factors (accountancy service, advertising service, banking service, legal service), beside German cities – though to a varied extent – Bratislava, Budapest, Prague, Vienna, and Warsaw have a dominant role in the Central European region (Table 1).

On the basis of the above-mentioned factors, GaWC examined and ranked 122 cities in a scale of 12 levels (GaWC inventory). Table 2 shows the result of the GaWC inventory, wherein most of the Central European cities are deemed to be gamma world cities, while Prague, Warsaw, and Budapest are undoubtedly the dominant large cities of the region.

Table 2. The GaWC inventory of Central European world cities

A	B	C
		6: Düsseldorf, Prague
10: Frankfurt	–	5: Warsaw
		4: Berlin, Budapest, Hamburg, Munich
Evidence of world city formation: Vienna, Bratislava, Cologne, Stuttgart, Dresden		
Explanation: A – alpha world cities; B – beta world cities; C – gamma world cities		

Source: Beaverstock et al., 1999

The GaWC analysis is considered to be important and of key significance, because it ranks Central European cities on the basis of objective criteria.

The analyses discussed so far rank the large cities of the region primarily on the global level, but at the same time – with the exception of GaWC – they are less concerned with the relative comparison of the cities. The next section will determine the ranking of large cities in the Central European region primarily with respect to their economic strength and on the basis of quantifiable parameters.

ROLE OF THE LARGE CITIES OF CENTRAL EUROPE IN ECONOMIC LEADERSHIP

Large cities are often ranked on the basis of fairly subjective criteria, primarily because these cities have few comparable data (Taylor et al., 2002; Szymańska, 2007). A generally measured characteristic is the population of the cities that ranks the settlements on the basis of the demographic approach, yet is not suitable for comparing economic characteristics. Turok and Mykhnenko (2007) think that changes in the population should be treated as a much more

important parameter than population itself, as they are material consequences and at the same time influencing factors of urban economic conditions. Their analysis examined changes in the population of 310 European cities in the period from 1960 to 2005, and defined 9 trajectories. In our opinion, most of the cities in Central Europe have medium-term decline trajectories, indicating considerable fallback after the growth of the 1970s and 1980s. All these traits obviously reflect the negative impacts of the socio-economic changes having taken place since the early 1990s. Budapest is in a special situation, as it belongs to the long-term decline category, a group of Western European cities (e.g., Lens, Le Havre, Saarbrücken, Magdeburg, Rhine-Ruhr) dominantly with declining industry. On the other hand, Mulligan and Crampton (2005) explain that today the intensive growth of the urban population primarily affects developing countries, while in Central Europe population tendencies are consistently decreasing. For the following reason, we do not consider the population of cities and its changes to be a determinant aspect of this analysis: (a) the population of large cities in Central Europe (mostly capitals) ranges from 500 thousand to 2 million, but there are no prominent differences among the cities. The most populous city of the region is Berlin with 3.7 million inhabitants, and thus it is the only one to belong to the 100 most populous cities of the world (UN, 2008). On international scale, the large cities of the region do not have determining population; (b) fundamentally, the cities of Central Europe have similar demographic attitudes, i.e., their population is mostly dropping (Turok, Mykhnenko, 2007); (c) world cities are principally distinguished by their leading roles in the system of global economy, and not their size (Sassen, 1995). Thus, it is important to examine the economic role of the cities on the basis of such direct parameters that – in contrast with the population – unambiguously indicate their role in global (or regional) economy. Of course, it is extremely difficult to find consistent and standard parameters, and therefore various authors tend to determine the economic power of cities in view of different data. Sassen (2006) suggests that today transnational companies (TNCs) act as the organizers of global economy, and on the basis of the revenues or market capitalization of TNCs the headquarter cities can be ranked. According to Musil (2009), a very characteristic indicator of global capital control is foreign direct investment (FDI), and with respect to its volume another hierarchic system can be created. Smith and Timberlake (2002) set up their ranking on the basis of the number of air passengers between cities of global significance in order to clearly reflect – in their approach – the role of the individual cities taken in the economic system. Taylor (2004) studied the global network connectivity of 315 cities and formulated a rank on the basis of the value of services provided by ten companies that are involved in accountancy, advertising and banking/finance operations.

In our opinion, the relative ranking of cities in Central Europe can be examined with the use of the sources listed above, as well as the data provided by international organizations.

Ranking of cities in view of GDP in purchasing power standards and nominal GDP

The simplest way to express economic performance is the use of the gross domestic product (GDP), which gives grounds to relatively accurate comparisons between national economies, when only estimates are available for cities. An analysis prepared by PricewaterhouseCoopers (PwC) in 2009 specifies figures for the GDP in purchasing power standards in the case of the world's 151 large cities. The 2008 data are estimates, while the figures for 2025 represent forecasts based on UN's population estimates. Table 3 shows that the city in Central Europe featuring the largest aggregate GDP PPS (Gross Domestic Product in Purchasing Power Standards) value is not a German city, but Austria's capital, Vienna. Ranking second with its population of 3.4 million, Berlin's GDP PPS value is only two thirds of Vienna, whose population is half of its German counterpart.

Table 3. Estimated GDP PPS values for the cities in Central Europe in 2008 and 2025

2008 rank	A	B	C	D	E
50	Vienna	122	67	Vienna	175
69	Berlin	95	86	Berlin	117
79	Hamburg	74	94	Warsaw	107
85	Warsaw	68	108	Hamburg	93
89	Munich	64	115	Munich	81
100	Budapest	53	116	Budapest	80
106	Prague	49	121	Prague	75
144	Kraków	13	150	Kraków	21

Explanation: A – cities ranked by estimated 2008 GDP at PPSs; B – estimated GDP in 2008 (billion USD at PPSs); C – 2025 rank; D – cities ranked by estimated 2025 GDP at PPSs; E – estimated GDP in 2025 (billion USD at 2008 PPSs)

Source: PricewaterhouseCoopers, 2009

According to PwC, the city with the largest economic performance within the Visegrád Group is Warsaw, which is ahead of Munich with respect to its value of GDP PPS. Although back in 2008 Warsaw still ranked fourth behind Hamburg, Table 3 shows that by 2025 it will have become the third most significant economic actor of the Central European region. In the light of the long-term forecasts, however, it can be seen that in spite of the absolute GDP PPS growth by 2025 all the cities of the region will have lost their positions in 2008.

We have examined PwhC's analysis with another study that also pertains to GDP values in purchasing power standards. The ranking has been established on the basis of the per capital nominal GDP values from the Urban Audit database with respect to the population of the cities concerned in 2010, as well as the changes in the GDP values of the national economies as published by Eurostat. Table 4 shows that the city in the region with the largest nominal GDP value is Berlin, followed by two other German cities, Hamburg and Munich. In this hierarchy, Vienna ranks only fourth. The capitals of the countries of the Visegrád Group – with the exception of Bratislava – have similar nominal GDP values, while their ranking is identical to the order published by PwhC.

Table 4. Estimated nominal GDP values for the cities in Central Europe in 2010

2010 rank	A	B	C	D	E
1	Berlin	86.41	14	Bremen	22.07
2	Hamburg	86.16	15	Essen	20.45
3	Munich	75.37	29	Bratislava	8.27
4	Vienna	69.62	30	Kraków	8.17
5	Frankfurt	51.44	31	Poznań	8.07
6	Cologne	43.22	35	Łódź	6.33
7	Düsseldorf	39.93	37	Wrocław	6.27
8	Stuttgart	35.97	42	Brno	5.40
9	Warsaw	33.45	43	Gdańsk	4.60
10	Budapest	29.35	46	Ostrava	3.66
11	Prague	25.56	48	Szczecin	2.80
12	Hanover	22.95	49	Katowice	2.67
13	Nuremberg	22.60	50	Plzen	2.32

Explanation: A – cities ranked by estimated nominal GDP; B – estimated GDP in 2010 (billion Euros); C – 2010 rank; D – cities ranked by estimated nominal GDP; E – estimated GDP in 2010 (billion Euros)

Source: Urban Audit, Eurostat, national statistical offices

The decentralization of national economies is clearly reflected in the ratios calculated between the cities featuring the largest and second largest GDP values. In Germany, Berlin's GDP is in fact identical to the GDP value of the second-ranking Hamburg (though the population of Berlin is fairly different from the population of Hamburg), and just 1.14 times larger than the value of the third city of the rank, Munich. In contrast, Warsaw's GDP is 4.1 times larger than the corresponding value of the second-ranking Kraków, Prague's GDP is 4.7 times larger than that of the second-ranking Brno, while Budapest's GDP is 22.6 times larger than the GDP value of Debrecen, which is not included in the list, but ranks second in Hungary. With the exception of Germany, the Central European

countries can be basically described by the economic dominance of their capitals, or at least it is reflected in the GDP data.

In the light of the GDP figures, a lot of conclusions can be drawn, but on the other hand the various estimates (breakdown of the national GDP to the level of the cities, changes in population) involve an excessively large number of factors of uncertainty. The analysis reveals that the figures for the nominal GDP and the GDP in purchasing power standards position the cities differently, while long-term estimates can be potentially modified by the economic crisis significantly – as it has actually happened.

Ranking of cities on the basis of the largest companies headquarters

Apart from the estimated GDP figures, the economic potentials of cities can also be determined in view of various details of the TNCs (Transnational Company) concentrating in the cities. According to Sassen (1991, 2006), it is not only the number of the headquarters that can be used for this purpose, but the revenues of the companies and their market capitalization, as well.

The following analysis determines which city hosts headquarters of the most significant companies in a given country, and what the associated revenues are with the use of the Forbes Global 2000 database for 2010. The ranking in Table 5 is a part of a broader analysis consisting of 544 cities. The hierarchy for 2010 shows the rank of the given city in Central Europe in this list of 544 cities. The headquarters of the companies found in the Forbes ranking have been determined with the use of Hoovers Inc's database, and finally the revenues belonging to these companies have been aggregated. Material differences can be seen when the order established in view of the GDP figures is compared with the ranking based on the revenues of the largest companies. The results emphasize the dominance of the German cities. As evidenced by Table 5, the world's 12th largest headquarter city is Munich (revenue of 434.95 billion USD), the aggregate turnover of 10 companies settled here is more than twice the combined revenues of 21 companies from Austria, the Czech Republic, Hungary, and Poland. Budapest, the city with the largest aggregate turnover (25.47 billion USD) in the Visegrád Group ranks only 135th in the international hierarchy. It is to be noted, however, that while both Hungary and the Czech Republic have given a single city to the ranking, Poland is represented by four cities: Płock, Gdańsk, Warsaw, and Lubin.

Obviously, the analysis presented here based on the revenues of the largest companies is only one of the possible approaches. In contrast with the GDP estimates reflecting relatively isolated conditions, however, the revenues of the largest companies are indicative of the role of the cities in economic leadership.

Table 5. Ranking of headquarter cities on the basis of the revenues of the largest companies, in 2010

2010 rank	A	B	C	D	E	F	G
	a				b		
12	Munich	434.95	10	64	Vienna	112.07	9
20	Düsseldorf	298.72	6	135	Budapest	25.47	2
28	Stuttgart	231.84	4	140	Płock	23.70	1
44	Bonn	169.47	3	180	Linz	16.46	2
51	Frankfurt	138.59	6	212	Gdańsk	11.92	2
70	Essen	93.18	2	227	Warsaw	10.70	2
82	Ludwigshafen	72.63	1	238	Prague	9.44	1
90	Hanover	64.23	3	317	Maria Enzersdorf	3.99	1
104	Leverkusen	52.62	2	320	Lubin	3.92	1
147	Karlsruhe	22.30	1				

Explanation: A – cities ranked by aggregate revenue of TNCs; B – aggregate revenue in 2010 (billion USD); C – number of HQs; D – 2010 rank; E – cities ranked by aggregate revenue of the largest companies; F – aggregate revenue in 2010 (billion USD); G – number of HQs; a – Germany; b – Central Europe without Germany

Source: Forbes, The Global, 2000

To demonstrate it with an example: according to PwhC, Metro Manila with its population of nearly 14 million features a USD 149 billion GDP PPS value (PwhC), which is larger than that of any city in Central Europe, while the combined revenue of its three TNCs ranked in the Forbes Global 2000 database can be matched only with the turnover of CEZ (Czech Power Company) in Prague.

Ranking of cities on the basis of the performance of their stock exchanges

Sassen (2006) calls the attention to the fact that a dominant characteristic of the world's leading cities is the considerable capital concentration, which is not solely represented by banks, but also by stock exchanges. Table 6 presents two distinctive parameters of stock exchanges in the Central European region: the number of companies listed at the individual stock exchanges and domestic market capitalization. In all respects, the most significant stock exchange in the region is the Frankfurt-based Deutsche Börse, which is the 12th largest stock exchange in the world on the basis of its market capitalization. In terms of market capitalization, the Budapest Stock Exchange, Prague Stock Exchange, Warsaw Stock Exchange, and Wiener Börse lag far behind the German floor. There are considerable differences also in the number of companies listed at the

stock exchanges. It is evident that the Deutsche Börse tops the ranking in this regard, as well, but the Warsaw Stock Exchange is also well ahead of the other exchanges. Since the stock exchanges mostly domestically registered companies are traded, the performance of the stock exchanges unambiguously reflects the relative strengths of the national economies.

Table 6. Key figures for the stock exchanges of Central Europe in 2009

	A	B	C
Budapest	Budapest Stock Exchange	46	30,037
Frankfurt	Deutsche Börse	783	1,292,355
Prague	Prague Stock Exchange	25	75,022
Vienna	Wiener Börse	115	114,076
Warsaw	Warsaw Stock Exchange	486	150,962

Explanation: A – stock exchange; B – number of listed companies in 2009; C – domestic market capitalization in 2009 (million USD)

Source: World Federation of Exchanges, Annual report and statistics, 2009

It is important to note, however, that for the stock exchanges of the Visegrád Group it has taken a fairly short period of time to reach their current potentials. All these stock exchanges started as late as in the early 1990s, after the change of the political and economic regime, first the Budapest Stock Exchange in 1990. According to Sassen (2006), the fast economic uplift in the countries of the Visegrád Group was substantially driven by FDI (Foreign Direct Investment), while the contribution of domestic companies to the performance of the national economy remained rather small. Since domestic companies are listed at the stock exchanges at the region – as it has been mentioned above – it is not surprising that the value for domestic market capitalization is low. Among other things, it allowed the Wiener Börse following a policy of expansion in the region to acquire majority shares in the Hungarian and Czech stock exchanges, against the Warsaw Stock Exchange in this latter case.

The rearrangement of the ownership structure of these stock exchanges suggests that Vienna and Warsaw are experiencing a strengthening role in the economic leadership of the Central European region, while Budapest and Prague's role is diminishing. In comparison with the stock exchanges of the above-mentioned cities, the Deutsche Börse is a different class, with respect to the value of market capitalization and the number of the traded companies it is one of the major centres of global money markets.

CONCLUSIONS

In recent decades, one of the most popular research orientations of social scientific studies has focused on cities. These researches primarily concern two areas: on the one hand, researchers examine what positions the booming megacities of the developing world take in global economy, and on the other hand it is still an important issue what hierarchy has evolved among the large cities of the developed world, and what the leading cities of the world are. The large majority of the cities of Central Europe are affected by these studies just marginally, as their population and economic potentials are not outstanding. Indeed, this view is also reflected in one of the most important works: the GaWC research embraces 122 cities, and designates the capitals of the Central European countries (with the exception of German cities) just as gamma world cities. Our analysis has examined Central European cities on the basis of three indices: (a) the GDP in purchasing power standards and nominal GDP of the cities; (b) the number and combined revenues of the largest companies' headquarters in these cities; (c) the number of the companies listed at the regional stock exchanges and their domestic market capitalization. It is not too surprising that the evaluation of the GDP data shows the dominance of German cities and Vienna, while from the countries of the Visegrád Group, Warsaw has the largest GDP value. Nevertheless, GDP figures tend to indicate the role of the cities taken in economic leadership just to a lesser extent, and rather reflect more isolated conditions.

For this reason, it is important to examine the locations and the revenues of the large companies. The obtained results suggest that in Central Europe it is evident that the German cities function as the centres of economic leadership, while the cities of the Visegrád Group – even Budapest featuring the largest combined turnover – belong only to the middle-ranking section in the hierarchy of the cities settled in the region. The analysis of the TNC data highlights an important special characteristic of the countries of the Visegrád Group: the largest number of headquarters and the largest volume of combined revenues are associated with Poland, because – in contrast with the Czech Republic and Hungary – beside the capital there are three additional cities with significant companies.

Finally, two characteristic parameters of the stock exchanges in the region have been examined: the total number of companies traded at the individual stock exchanges and domestic market capitalization. The Frankfurt-based Deutsche Börse dominates the group of stock exchanges in Central Europe, and it is a leading actor of the global money markets. The leading stock exchange of the region is the Warsaw Stock Exchange, which the Wiener Börse intends to compete with by acquiring control over the stock exchanges of Budapest and

Prague. On the other hand, the number of companies traded at the Warsaw Stock Exchange is larger than the combined number of companies listed at all the other stock exchanges of the region, while the strengthening of the Polish economy is expected to result in the increase of market capitalization.

Our fundamental conclusion is that in terms of economic leadership the dominant cities of the Central European region are the German cities and Vienna. From among the cities of the Visegrád Group, Budapest, Prague, and Warsaw currently show similar performance, but Warsaw is foreseen to take the leading role.

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THE PERSISTENCE AND INTERACTION OF MULTI-ETHNIC SETTLEMENT REMNANTS IN THE CULTURAL LANDSCAPE

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ABSTRACT. The paper deals with remnants of multi-ethnic settlement: their form, interaction and persistence. In the past, the Podlasie region, situated in northeastern Poland, was an area of multi-ethnic settlement. The interaction of cultures brought the emergence of a new, borderland culture. As the years have passed, the memory of the sources of regional and local traditions has disappeared. Elements of ethnic and religious traditions have spread and survived in the material structures of the rural landscape.

The most significant traces of cultural interactions and at the same time the remnants of past landscape are high roadside wooden crosses with an additional small iron cross on their top, decorated with the crescent moon and sunbeams. The cross with half-moon has its beginnings in old Christian symbolism, regional history and tradition. The crescent was always accompanied by sunbeams and they meant sun and moon, day and night, Christ and Our Lady. Its material durability appears to be greater than the collective memory of the locals.

The roadside wooden crosses embellished with iron crescent cross are an interesting part of regional heritage. The symbol of the crescent was common here for all Christian inhabitants and Tatars, unifying all Podlasie people. This uniting symbol is the most valuable remnant of the interaction of multi-ethnic settlement in the cultural landscape of the Podlasie. These days, the 300 years of tradition falls into oblivion, but regional cultural heritage can be saved through tourism-related product and marketing. In peripheral, economically neglected areas like the study case, the remnants may become an impetus to develop the local economy through recreation and tourism. Furthermore, making new tourism products based on natural and cultural values can be a good opportunity to restore precious elements of the historical landscape.

KEY WORDS: Poland, Podlasie, cultural landscape, multi-ethnic settlement, settlement remnants.

OUTLINE OF THE PROBLEM

The structure of the cultural landscape consists of the functional and symbolic layers reflecting human activity. It is a cultural depository and requires certain skills to read its meanings. The durability of the remains of historical settlements in the cultural landscape of the ancient Polish-Yotvingian-Ruthenian borderland is the result of real mutual cultural diffusion. Elements of ethnic and religious traditions have spread and survived in the material and mental structures of the rural landscape not only in the above-mentioned area, but in many other countries as well (Szymańska, 2009). As the years have passed, the memory of the sources of tradition has disappeared, and tradition is retained in collective memory, toponyms, the mental landscape, and local customs.

Recognizing these traces of historical settlement and clarifying the way that they function in the cultural landscape requires an interdisciplinary approach to the landscape structure and use of knowledge on and examination methods of historical geography and history, ecology and landscape geography, digital cartography and spatial analysis with GIS tools, landscape architecture and management, as well as sociology and cultural anthropology.

How did the multi-ethnic landscape appear in past centuries? Are any remnants of the multi-ethnic settlement still visible in the landscape? What is their persistence in the cultural landscape? The problem is the fading of old traditions in the multi-cultural area. It is worth revealing, explaining and restoring for the public; bringing it to life. This is a story about tradition that was forgotten, people that survived the hell of never-ending wars and totalitarian systems, artefacts that outlived memory, and hope for a better life. This is a story about the Podlasie landscape.

SOME COMMENTS ON THE DEFINITION OF LANDSCAPE

Every landscape can be described with six concepts. Different approaches use various expressions, but any landscape synthesis has to include all of them. One can distinguish the following categories of landscape description: (a) form (view, image, scenery, sight, shape) – the general appearance of the environment, the shape or appearance of something; (b) structure (pattern, arrangement, set-up, relations) – the way in which the parts of a system or object are arranged or organized, or a system arranged in this way; (c) function (role, aim, use, usefulness) – the natural purpose of something, purpose and use; (d) value (advantage, cost, quality, economics) – the beliefs people have about what is

right and wrong and what is most important in life, which control their behaviour, or the amount of money which can be received for something; importance and worth; (e) evolution (development, dynamics, change) – a gradual process of change and development; (f) origins (rise, history, heritage, symbol) – features belonging to the culture of a particular society, such as traditions, languages or buildings, which still exist from the past and which have a historical importance, the way in which something began to exist.

To find an answer to our question on landscape definition, we can divide all realities into two categories: simple and complex. Landscape is complex, a theoretical concept deriving from 16th century painting art. It has at least a dual nature: at the same time it is both a system and an image of the surroundings. It is an epistemological notion, not an ontological one. The world we experience is a product of our imagination, thus a 'landscape' is a logical structure arising in somebody's mind and is connected to human perception. Daniels and Cosgrove (1989) defined landscape as a cultural image. Landscape is not a steady image but a mental dynamic construct, usually including notions: (a) area; (b) system; (c) image (e.g., geocomplex, natural/cultural landscape). It allows to structure and explain natural and human environment mechanisms.

Sometimes landscape is a synonym for environment (all components in surroundings) or region (spatially heterogeneous area) and landscape geography is regarded as complex physical geography. Landscape geographers use the notions 'geosystem' and 'geocomplex'. Geosystem is a part of geographic space that can be separated from the surroundings with regard to structure (Richling, Solon, 2002). Geocomplex is a relatively closed sector of nature which constitutes a whole due to processes occurring within it and interdependences of geocomponents of which it is composed (Richling, 1983).

There are six research approaches in landscape studies: (a) scenic – landscape architecture and design; (b) structural – physical geography and landscape ecology; (c) functional – planning and management of space, town-planning; (d) genetic – historical geography and landscape archaeology; (e) economic – spatial economy, agriculture economics; (f) humanistic – human geography, sociology, ethnology. The 'landscape' notion used in landscape ecology and physical geography approximates to the term 'environment', but the difference is significant: landscape is subjective, local and temporary (just like a culture), while environment exists objectively, is global and eternal – just like nature. Both landscape and environment are diverse and complex – just like a culture in nature. The notions are associated with each other. In spite of the many approaches and ways of studying landscape, there is only one landscape, it is simultaneously physical and mental. A landscape definition depends on aim of the construct – from this point of view all they are correct.

Landscape is built of layers, just like Geographic Information Systems (Fig. 1). Most popular landscape models are of the geocomplex model (Haase, 1964), patch-corridor model (Forman, Godron, 1986) and linear concepts: landscape boundaries, ecotones and ecolines. What is landscape for? The idea of landscape was developed to gain the desired state of human surroundings. It is a tool enabling the formation of a sustainable human environment and helping humankind to achieve a higher quality of life.

SYSTEM	LAYER	DURABILITY
CULTURE (society)	HUMANS / SOCIETY	
	SYMBOLS / MEANINGS	
	FACILITIES / INFRASTRUCTURE	
	LAND COVER / LAND USE	
	CADASTRAL PLOTS / OWNERSHIP	
NATURE (geosystem)	FAUNA / FLORA	
	WATER / CLIMATE	
	SOIL / GEOLOGY	
	RELIEF / TERRAIN	

Fig. 1. Landscape layers

Source: Developed by author

The cultural landscape is conditioned by the cultural image of geographic space, formed by people (anthropogenic space). UNESCO documentation states that: cultural landscapes are distinct geographical areas or properties that uniquely 'represent the combined work of nature and of man' (Operational Guidelines, 2005: 83).

THE PODLASIE REGION AND AREA OF INVESTIGATION

The Podlasie Region (Podlaskie voivodship), situated in northeastern Poland, is one of the most valuable natural and cultural regions of Poland, which includes many protected areas. The eastern part of the region is well-known as a place where cultures meet. It is the most culturally diverse of all Polish voivodships (administrative region of the 1st order). The northwestern part still awaits examination.

The investigated area lies in the fork of the lowland Biebrza and Narew Rivers, amid the triangle of the towns of Wizna, Trzcianne and Tykocin, in the buffer zone of the Biebrza National Park (Fig. 2). In this cultural landscape there are valuable and undiscovered cultural traces of Polish, Ruthenian and Jewish ethnic settlements.

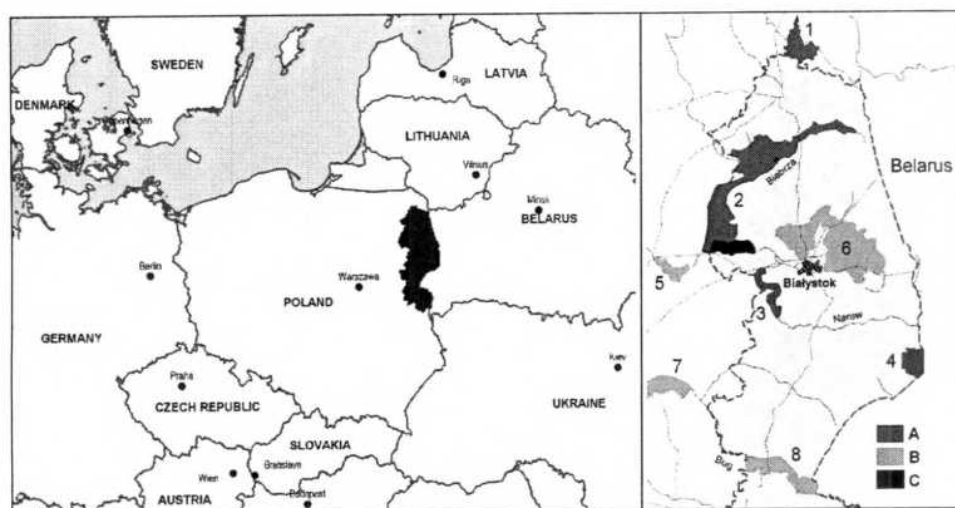


Fig. 2. The Podlasie Region and area of investigation

Explanation: A – national parks: 1 – Wigry NP; 2 – Biebrza NP; 3 – Narew NP; 4 – Białowieża NP; B – landscape parks: 5 – Narew Valley LP; 6 – Knyszyn Forest LP; 7 – Bug River LP; 8 – Podlasian Gorge of Bug River LP; C – investigated area

Source: Developed by author

The nearest large city to the area researched is Białystok, located 25 to 50 km away and populated by 300,000 people. Some 30% of the area of the voivodship is protected due to its natural features. Most famous area is Białowieża Forest, that creates a biosphere reserve and is a UNESCO World Heritage Site. In the region there are four National Parks (Białowieża, Biebrza, Narew, and Wigry), four Landscape Parks (Knyszyn Forest, Bug River, Łomża, and Suwałki), 88 nature reserves, and 15 protected landscape areas. The plant life in the region is extremely rich, and there is a very diverse animal world with hundreds of species of birds and other animals. The investigated area lies next to the Biebrza National Park, which protects the Biebrza Wetlands, the very rare fens in Europe connected with the river valley. The National Park was established in 1993 and

covers 59 thousand hectares. It is the largest national park in Poland. The Biebrza Wetlands are renowned as an important breeding, feeding and stopover site for birds of prey and many waterfowl and wetland birds. Biebrza Valley is one of the last important bird refuges in Europe. Here over 270 species of birds have been recorded, which is about 70% of the total number of bird species living in Poland (according to administration of the Biebrza National Park, see more: www.biebrza.org.pl). In a buffer zone of the park, farmers participate in semi-organic agricultural operations, especially grazing.

To understand regional conditions we have to go back to the Middle Ages and times of Rzeczpospolita, that is *Res Publica* (Republic), being the synonym of the former Polish–Lithuanian Commonwealth. The historic map of the Republic of the Polish Kingdom and Grand Duchy of Lithuania from 1760 shows the Podlaskie voivodship, which existed almost 300 years from the beginning of the 16th to the end of 19th century. Podlasie was situated in the same centre of powerful republic, between Poland and Lithuania (Fig. 3).

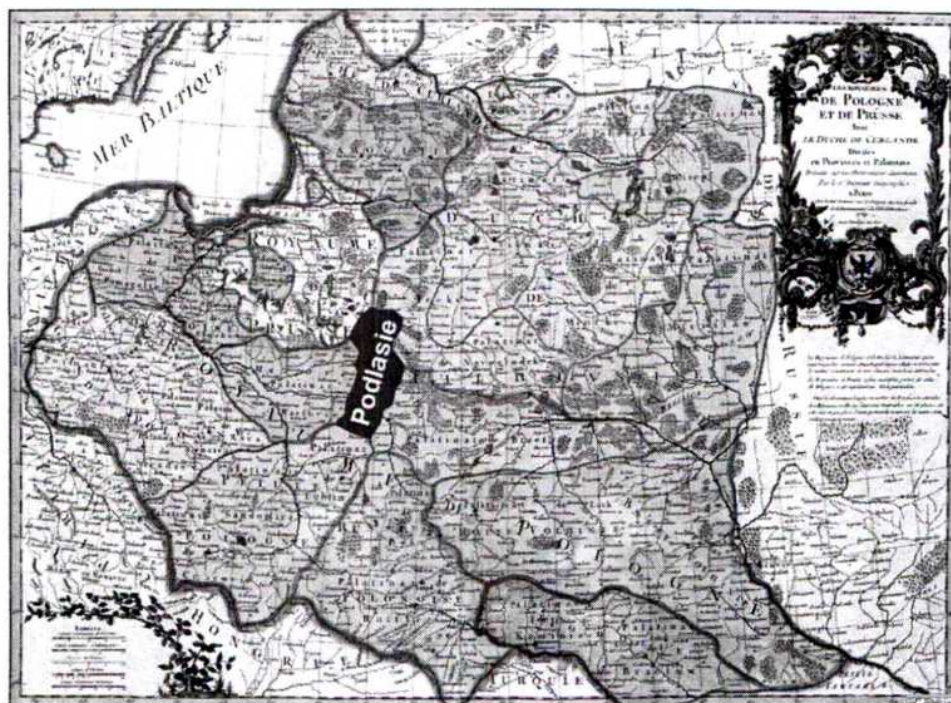


Fig. 3. Podlasie in the Polish–Lithuanian Commonwealth (Kingdom of Poland and Grand Duchy of Lithuania), 1760

Source: dziedzictwo.polska.pl/

The oldest information on the Podlasie area testifies that it was inhabited by Yotvingians (Polish: Jaćwingowie, Jaćwięgowie or Połekszenie, also called Sudovians, Suduvians, Jatvians) (Okulicz-Kozaryn, 1983). In the 10th–11th centuries the region became the rivalry arena for stronger and more expansive neighbours: Lithuanians, Masovians and Ruthenians. In the course of time Yotvingian territory has shrunk (Fig. 4). Since 1038 the important fortified town of Drohiczyń was occupied respectively by Polish Masovians, Kievian Ruthenians, Ruthenian Galicians, and also Highland (Aukštaitija) and Dainava (Dzūkija) Lithuanians. In 1283 Sudovians took their last stand and after this the present Podlasie stayed empty until the beginning of the 15th century. In 1422, the State of the Teutonic Order, Lithuania and Poland concluded a treaty, partitioning the empty pagan space of Sudovia. Podlasie became a Lithuanian voivodship in 1513, and in 1569 was incorporated into the Kingdom of Poland. Large part of Podlasian area formed in the past Sudovian territory.

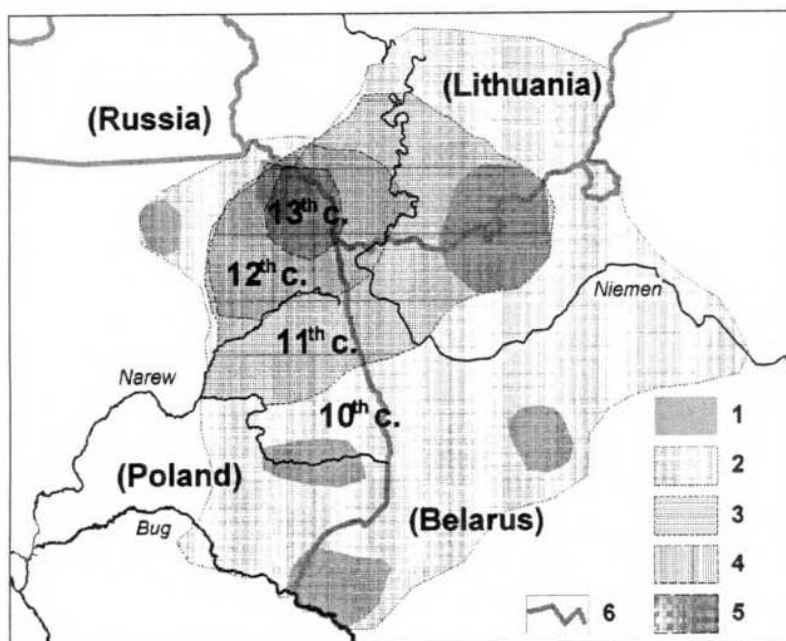


Fig. 4. Gradual shrinking of the Yotvingian tribal area (against present-day borders)
 Explanation: 1 – concentration of Yotvingian tumuli; 2 – extent of Yotvingia in 10th century; 3 – Yotvingia in 11th century; 4 – Yotvingia (Sudovia) in 12th, and 5 – in 13th century; 6 – present political borders

Source: Developed by author

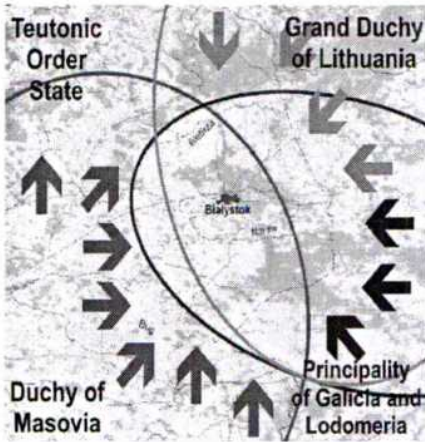


Fig. 5. Settlement race to forests of Sudovia in 11th–16th centuries on the background of today forests, political borders and location of the Białystok city

Source: Developed by author

Most of the depopulated area stayed nearly empty for around 200 years. It was covered by vast primeval forests, separating Baltic and Slavic tribes. Their remains is Białowieża Forest National Park, the last fragment of virgin forest in Europe. The settlement started after the Polish-Lithuanian victory over the Teutonic Order in the Great War and battle of Grunwald in 1410. The settlement race continued from three directions: northeastern, southeastern and southwestern. Villages and towns were founded according to Magdeburg or Lithuanian, Polish, and Ruthenian common law (Fig. 5).

THE PAST ETHNIC LANDSCAPE OF THE AREA

The area was – together with the Beskid Sądecki Region in the Carpathian Mountains in southeastern Poland – the furthest range of east-Slavic Ruthenian settlement in Europe. The ongoing mixing and interaction of settlers led to the formation of a regional ethnographic group called Podlasianie (or Podlaszanie).

The most important factor in shaping the former ethnic landscape of the area was the construction of the Tykocin royal castle in the 15th-16th centuries (Fig. 6). The fortress was an arsenal and treasury of Rzeczpospolita. In order to secure the services and defence of the castle, the Polish king settled peasants, wild-bee keepers, craftsmen, knights, and other warriors coming from different parts of the Republic and beyond. Among them were Polish gentry, Moscow boyars and Tatar soldiers (Maroszek, 2000).

Some of the settlers intermixed with other and local people and gradually vanished into the settlement background (Fig. 7, 8). This especially concerns Ruthenians and Tatars. In the Polish-Lithuanian Commonwealth, Tatars were

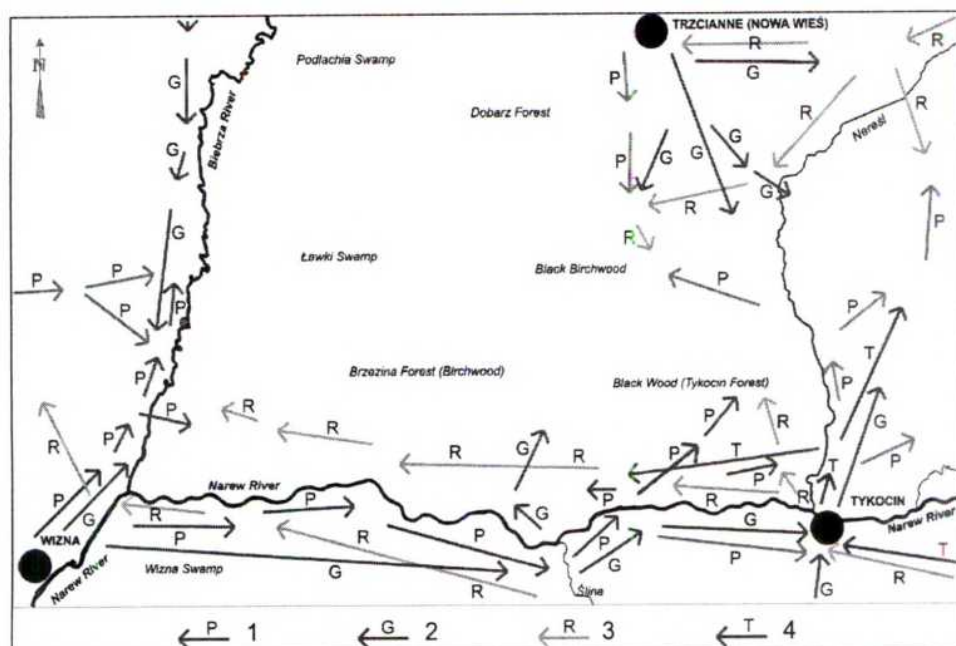


Fig. 6. Directions of ethnic migrations in the 15th-17th centuries

Explanations: 1 – Masovian peasants; 2 – Masovian gentry; 3 – Ruthenian-Lithuanian boyars and peasants; 4 – Tatar settlers

Source: Developed by author

allowed to intermarry with Christians, an uncommon occurrence in Europe at that time. Over a dozen Tatar families were polonized; that is they became Poles. Ruthenian settlers were usually settled as Catholics, but the remains of their eastern origins lasts in the local customs, like eastern tradition of tying a fabric on a cross. Fortunately some of the parish register books survived wars, preserving records since the 17th century and greatly helping to reveal the settlement process.

Next to the castle, on the other side of the Narew River, exists the town of Tykocin, located on a river passage. The town was situated on the route from Kraków to Vilnius and Moscow, on the border of Masovia and Lithuania. Civic rights based on Chełmno (Kulm) law were given to Tykocin in 1425 by Masovian Duke Janusz. From the year 1522, Tykocin was open to Jews. Today Tykocin is a historic, baroque urban complex. It was, along with Cracow, the largest and most important Jewish community in the Republic in the 17th-18th centuries. Until World War II, Tykocin was an important centre of Jewish culture and at the present time is a tourist attraction in northern Poland.

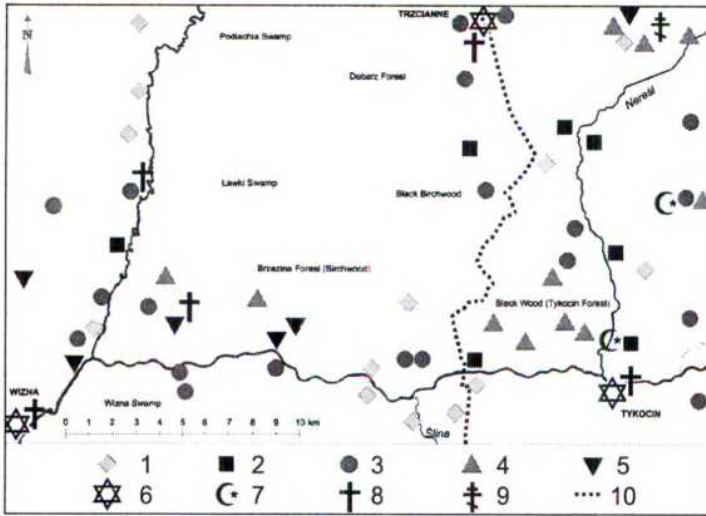


Fig. 7. Ethnic settlement in the area in 17th and 18th centuries

Explanation: 1 – Polish petty gentry; 2 – Polish gentry and peasants; 3 – Masovian peasants; 4 – Ruthenian peasants; 5 – Ruthenian boyars and peasants; 6 – Jewish communities; 7 – Tatar cluster; 8 – Catholic church; 9 – Orthodox Uniate church; 10 – Medieval ‘Duke Vytautas’ Road’ from Wizna to Goniądz

Source: Developed by author

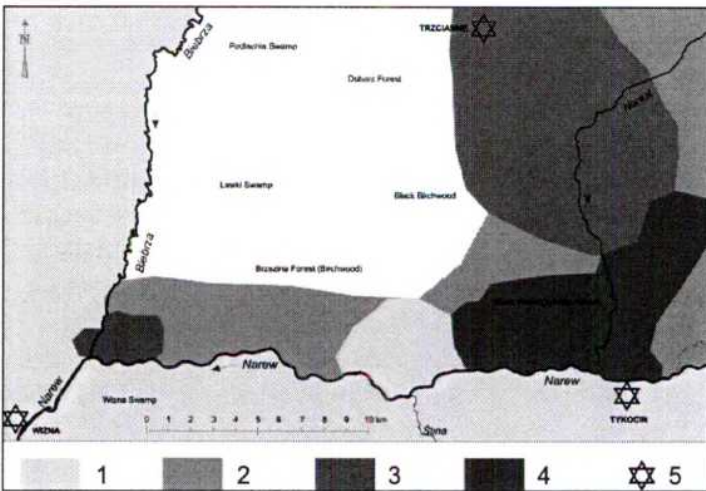


Fig. 8. The ethnic landscape of the area between the 16th and 18th centuries

Explanation: 1 – Masovian; 2 – Lithuanian-Ruthenian; 3 – Lithuanian-Ruthenian-Masovian; 4 – Lithuanian-Ruthenian-Masovian-Tatar; 5 – Jewish

Source: Developed by author

REMNANTS OF SETTLEMENT AND CULTURE INTERACTION

In the Podlasie landscape there are no dominating structures, so the traces of cultural interaction are hardly readable. The culture of Podlasie combines elements of Masovian and Ruthenian folklore, history of Poland, Lithuania and Ruthenia, Catholic and Orthodox beliefs. In the collective memory of Podlasians there exists a vision of a common past, though expressed in different ways. Among the remains of ethnic settlement in the area, one can perceive both the material and immaterial: (a) village layout – there are two kinds of village layouts in the vicinity: regular and irregular. Giełczyn is an example of a regular linear village (*ulicówka* – Strassendorf, road village), established *in situ* in 1559, during land reform in the Grand Duchy of Lithuania, called '*pomiara włóczna*' (land survey). Those villages were settled both by Polish and Ruthenian peasants. Łaziuki village represents the other type – the irregular forest settlement, dated to the 17th–18th centuries, functionally connected to the Tykocin fortress. Such villages were often populated by Polish Catholic peasants of Ruthenian origin; (b) wooden architecture: unfortunately, wooden buildings disappear from the landscape. Examples are the wooden catholic church in Giełczyn, built in 1777 and seriously damaged during WWII, and still used by the smallest parish in Poland (100 people). Another: Łazy – a village with wooden houses of the Polish petty gentry with the characteristic veranda, from the beginning of the 20th century; (c) toponyms and anthroponyms: many field objects are traces of the ethnic past. Ławki Swamp is a protected swamp, a part of Biebrza National Park, which possesses many named places, described in Polish as '*uroczyisko*' (a special, separated, natural place) – they are situated in forest and are distinguished by unusual natural features. Part of them have Ruthenian or Lithuanian (Sudovian) origins. At cemeteries, one can find Podlasian surnames of eastern origin (Lithuanian-Ruthenian) with depictions of Our Lady of Vilnius along with the crescent; (d) traditions and customs: during centuries of common life, different ethnic groups have exchanged many customs, cuisines, technical solutions, ideas, stories, religious practices, and even cult objects; part of them were memorized and are still passed from generation to generation, while others have vanished; (e) religious and national symbols: they are present in the surroundings of each place, such as at crossroads, village borders, cemeteries, private estates, hills, houses, etc. In Giełczyn, one can find an iron cross with a crescent on top of four meter high wooden cross. Another example is such a cross hanging on the outside wall of the parish church. Initially, it was fixed on a tombstone in the church graveyard, then later hung of the church. In Tykocin there still exist houses with Magen David (the Shield/Star of David), symbolizing Jewish inhabitants of

the town (former *shtetl*); (f) language melody: this is the special intonation of spoken Polish, which derives from East Slavic languages. It is very melodious and 'drawling', i.e., has an East European melody; (g) collective memory and sense of identity: in a multicultural society, identity is a matter of importance. Man needs to define himself in the face of the existence of other groups. In this area collective memory and awareness of identity are weak, but the memory of ethnic origination has survived in the recollections of locals.

The most significant traces of cultural interactions and at the same time the remnants of past landscape are high roadside wooden crosses with an additional small iron cross on their top (Fig. 9). This cross is decorated with the crescent moon, but in fact, this is not a decoration. Roadside crosses can be commonly found all over Eastern Europe. Crosses with the half-moon crown church towers, shrines and figures of Our Lady, from the Canary Islands to Moscow. The exceptionality of the Podlasian roadside crosses consists of the additional small cross with crescent and sunbeams made of wrought iron. Such combinations of large and small crosses, the simple Latin cross with the solar-lunar symbol made of natural wood and handmade iron, is characteristic only for the Podlasie Region.

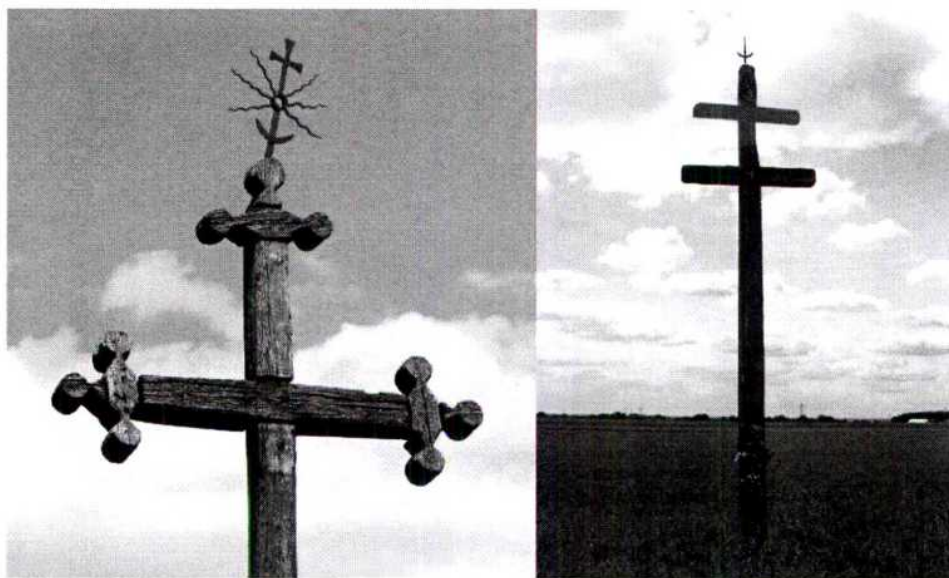


Fig. 9. Wooden road crosses with iron crescent cross: traditional and two-barred caravaca
Source: Developed by author

ORIGIN AND MEANING OF THE ARTEFACTS

Poland is the land of crosses: they stand at crossroads, village boundaries, old graves, historical places, private estates, in every place that has a meaning. If we assume that one settlement is accompanied by only one cross, it gives us more than 56 thousand crosses. In fact there are not less than 200 thousand open-air, freely standing crosses in Poland. The most valuable are wooden and decorated, sometimes very ornamented and meaningful. Wooden crosses were founded by village inhabitants as thanksgiving or protection against fire, plague, famine, and war.

There are 5 types of Christian crosses in this part of Podlasie (Fig. 10): (a) plain Latin cross (*crux ordinaria*); (b) Eastern Orthodox cross: a patriarchal cross (*crux gemina*) with a short, slanted crosspiece, common in Byzantine Greek

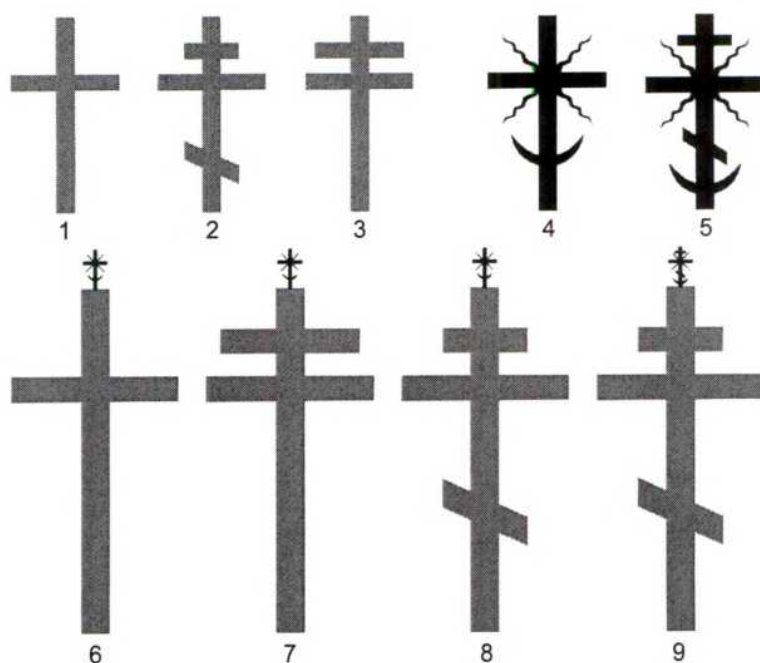


Fig. 10. Types of crosses in the Podlasie Region

Explanation: 1–3 – crosses made of wood, stone or iron: 1 – Latin; 2 – Orthodox, 3 – Caravaca; made of iron: 4 – Latin, 5 – Orthodox; high crosses combined of wood and iron: 6 – Latin, 7 – Caravaca, Orthodox with 8 – Latin and 9 – Orthodox addition

Source: Developed by author

and Eastern European iconography; (c) Caravaca cross (Polish: *karawaka*): two barred cross similar to the patriarchal or archiepiscopal cross, but with the higher bar equal or nearly equal to the lower one, dated to the 16th century from the town of Caravaca in Spain. It was created in order to stop a cholera epidemic (Brückner, 1985). In Poland, it was very popular from the 18th to the beginning of the 20th century; (d) Latin cross with crescent; (e) Orthodox cross with crescent.

There are a total of 66 roadside crosses in the area, in this number 12 are made of wood (Fig. 11). They are very differentiated: made with iron, wood, concrete, stone, mixed materials, built for various purposes, such as for thanksgiving, commemoration, wishes, requests to God for intercession or as a landmark.

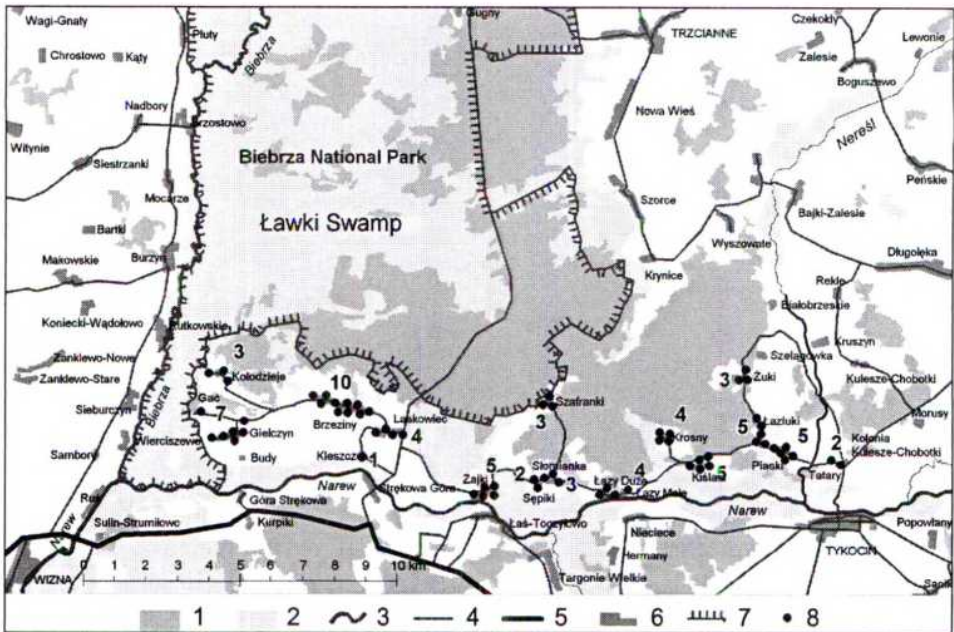


Fig. 11. The location and number of roadside crosses in the area of investigation
 Explanation: 1 – forest; 2 – swamp and wet meadows; 3 – river; 4 – road; 5 – main road; 6 – settlement; 7 – border of Biebrza National Park; 8 – roadside cross

Source: Developed by author

The cross with crescent has its beginnings in old Christian symbolism and tradition. An essential place in a church is a tabernacle. It is a locked box containing the Eucharist, called Holy Communion or the Blessed Sacrament, which is considered to be appointed emblem of bread and wine from the

sacrament of the Lord's Supper. The tabernacle contains custody, i.e., a metal liturgical box, used in Catholic church to store Holy Communion in the form of Host. Custody serves to move the Host to monstrance to enable public adoration of Blessed Sacrament. It encloses a semicircular support for the Host, called *luna* or *melchizedek*. Melchizedek was an Old Testament (Hebrew Bible) figure, the King of (Jeru) Salem and priest, who brought bread and wine to Abram, blessed him and received tithes (Genesis, 14:18–20). The *luna* was named after the similarity between Eucharist and Melchizedek – 'the giving of bread and wine'. The luna-melchizedek took the shape of the crescent moon. In this way, the crescent became the symbol of the Christian sacrament and a part of a cross.

In 1710, in the year when Riga capitulated to Russia, disaster fell on Podlasie. During the Great Northern War (1700–1721), Swedish, Russian, Saxon, Brandenburgian, and Polish-Lithuanian armies brought to Podlasie destruction, plunder, famine, and the plague (cholera epidemic), which led to the deaths of tens of thousands of people in the region. In the vicinity of Siemiatycze, people took refuge from the plague in a forest in the place now called Holy Mountain of Grabarka. All of them survived. Thus the cult of Grabarka Mountain and Holy Spring was born. After the epidemic, people began to build caravaca and other wooden crosses. The crosses were crowned with the additional iron crescent cross to strengthen protection from the plague, famine, enemies, and fire. The tradition thus began.

The crescent was not an ornament, but a part of the cross. The source of the crescent in an iron cross is a luna-melchizedek (Fig. 12). It symbolizes the Blessed Sacrament, the body and blood of Christ. The meaning of the crescent

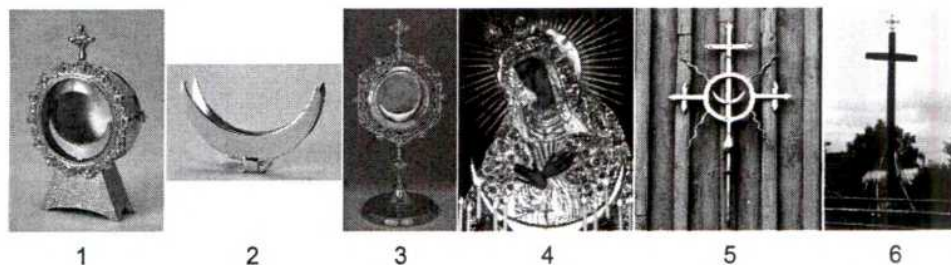


Fig. 12. The origin of the crescent in Podlasian crosses

Explanation: 1 – a custody; 2 – a luna (melchizedek); 3 – a monstrance; 4 – Our Lady of the Pointed Gate in Vilnius (the votive silver crescent at the bottom of the painting dates to 1849); 5 – the iron cross with crescent, hanging on outside wall of the parish church in Gielczyn; 6 – a wooden roadside cross with iron crescent cross in Piaski Village

Source: 1–3: www.dewocjonalia24.pl [09.08.2010]; 4–6: developed by author

in Christianity is much wider. For many years, the crescent was not affiliated in any way with Islam; it did not become a Muslim heritage symbol until the 19th century. In Christian culture the crescent stands for the: (a) representation of Eucharist (Holy Communion); (b) East European Marian cult (in the area – cult of Our Lady of the Pointed Gate in Vilnius); (c) symbol of glory and the victory of good over evil (along with a cross); (d) sign of hope, especially for resurrection; (e) symbol of faith and fidelity (to the faith); (f) East churches sign (Armenian, Orthodox, Uniate); (g) half-pagan symbol of sin, night, water, silver, vessel, plenty, mystery; harvest, woman (for more see: Kopaliński, 1990); (h) talisman against plague and other disasters (enemies, fire, famine, etc.).

Widespread in Eastern Europe, the Marian cult can be easily seen in the landscape. In Święta Lipka (a village in northern Poland), a sculpture presents the Madonna treading triumphantly on the crescent, the symbol of night and evil. In the old town of Kamieniec Podolski (former Polish Republic, today Ukraine), the sculpture of the Madonna is standing on the crescent on the top of the Muslim minaret, built by Turks next to the Catholic cathedral of Saints Peter and Paul. This is the only church in Europe (not counting mosques changed to churches) with minaret.

The crescent was also used as a heraldic symbol. Some Polish coats of arms have a crescent moon, usually only as a representation of the waxing crescent moon (Polish: *przybywający księżyc, półksiężyc, księżyc w nowiu niepełny*). The roots of

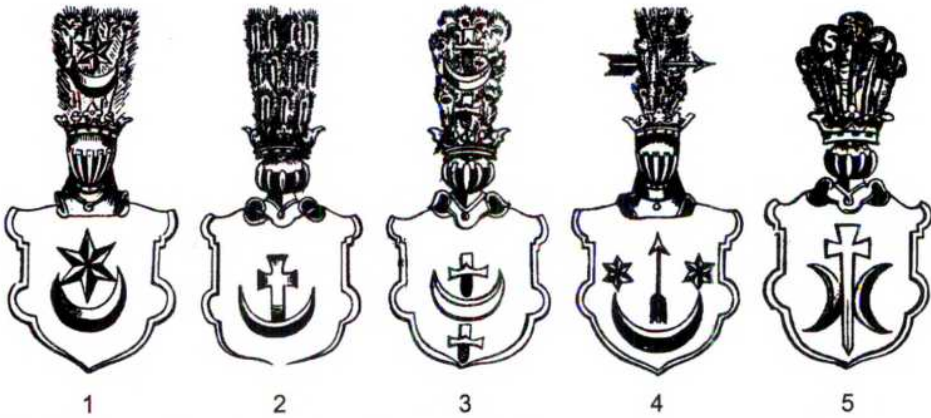


Fig. 13. Examples of Polish coats of arms with crescent

Explanation: 1 – Leliwa; 2 – Szeliga; 3 – Trzaska; 4 – Sas (of Hungarian provenance); 5 – Ostoja

Source: *Herby rycerstwa polskiego. Napięcioro Xiąg rozdzielone. Przez Bartosza Paprockiego zebrane y wydane Roku Pánskiego 1584, 1858: Kraków: Wydanie Kazimierza Józefa Turowskiego, Nakładem Wydawnictwa Biblioteki Polskiej*

the crescent in Eastern European culture can be traced both to Western European heraldy and old Slavic beliefs. Among others, Polish heraldry includes coat of arms called *Leliwa* – the word being explained as a new moon at a moment when the star Venus towers over it (Błaszczynski, 1901; Fig. 13).

The crescent cross is also similar to Asiatic and Eastern European tamgas (in Altaic: *stamp* or *seal*, in Turkish: *mark*, *stamp*), an ownership and tribal sign, a kind of rune-like symbol among Great Steppe tribes and East European Balts and Slavs (confront Lithuanian coat of arms 'columns of Gediminas', Ukrainian national emblem 'tryzub', i.e., trident, Kushan royal tamgas and other). Some Podlasian iron crosses resemble a trident crown of a bunchuk (Polish: *buńczuk*), that is a pole with a piece of horse tail hair, decorated with a trident or a crescent, used by the Mongol and Tatar armies as a flag (Fig. 14).

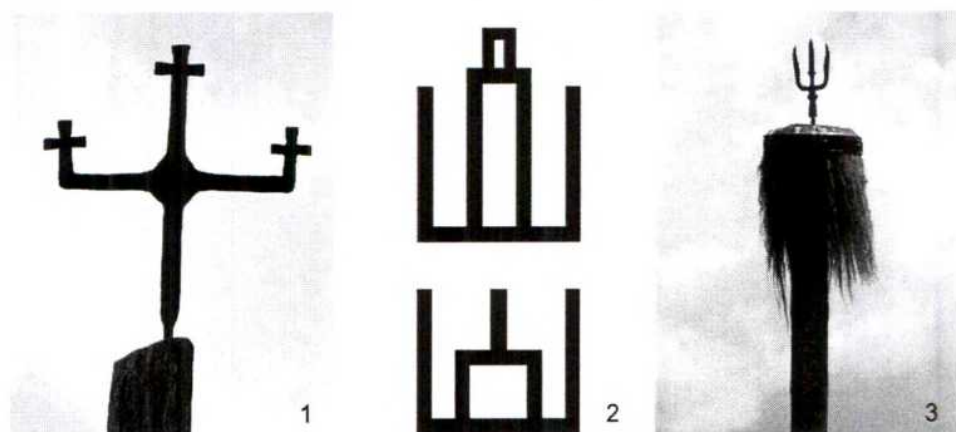


Fig. 14. Podlasian crosses and pagan symbols

Explanation: 1 – iron cross in village of Giełczyn; 2 – Lithuanian tamga (so-called 'columns of Gediminas' – medieval insignia of Gediminas family); 3 – Mongolian bunchuk

Source: 1–2: developed by author; 3: www.edudemo.org.pl

The crescent in iron cross was usually accompanied by sunbeams. The half-moon and sunbeams meant sun and moon, day and night, good and evil, etc. Crescent crosses can be found in Podlasie in many places: a gravestone surmounted with the crescent cross at the joint Catholic-Orthodox cemetery in Boćki, the wooden caravaca adorned with an iron crescent cross in the vicinity of Wiszowate village, etc. Wooden roadside crosses with iron crescent crosses are present only in Podlasie. The largest collections of iron crescent crosses can be seen in the Podlasie Museum in Białystok and the State Ethnographic Museum in Warsaw (Fig. 15).

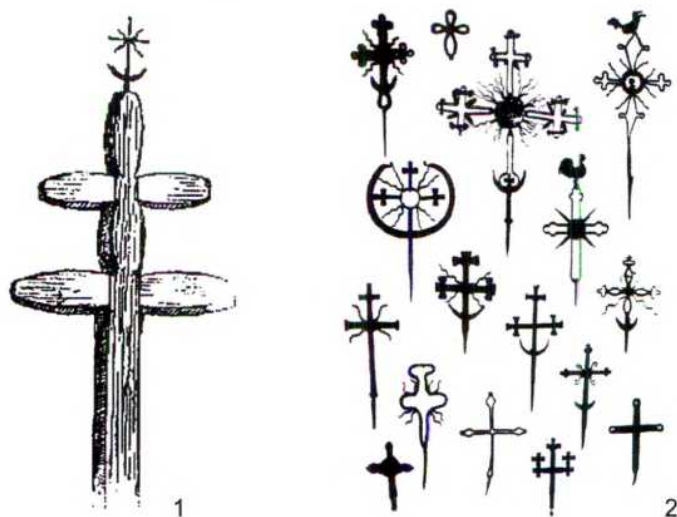


Fig. 15. The Podlasian crosses in regional folklore

Explanation: 1 – the oldest picture of Podlasian caravaca with crescent iron cross from the surroundings of Trzcianne; 2 – the collection of iron crosses in the State Ethnographic Museum in Warsaw

Source: 1 – Gloger, 1865; 2 – developed by author

DISAPPEARING TRADITION

The roadside wooden crosses embellished with iron crescent cross are an interesting part of regional heritage, but the sense of this phenomenon lies much deeper than once thought farmers, who dug from their fields old iron crosses. Old wooden crosses are being replaced by metal ones, with no additional cross. Tradition disappears (Fig. 16).

A short socio-cultural description of the area gives a very traditional image of the society, including the Polish, patriotic ethnos, traditional, multi-generational family. People practise Roman Catholicism and cultivate traditional rural customs. They vote mainly for conservative rightist parties and feel a regional Podlasian identity. Social bonds are strong here, characterized by local ties. Today, the area of investigation has a peripheral location, a weak local economy and poverty. The field research pursued by author in the area revealed surprising attitude of the local people to the crescent crosses: (a) no one remembers the origin and meaning of the crescent; (b) many inhabitants associate the crescent with Islam; (c) most people kindly accept the idea of the protection of melchizedek crosses.

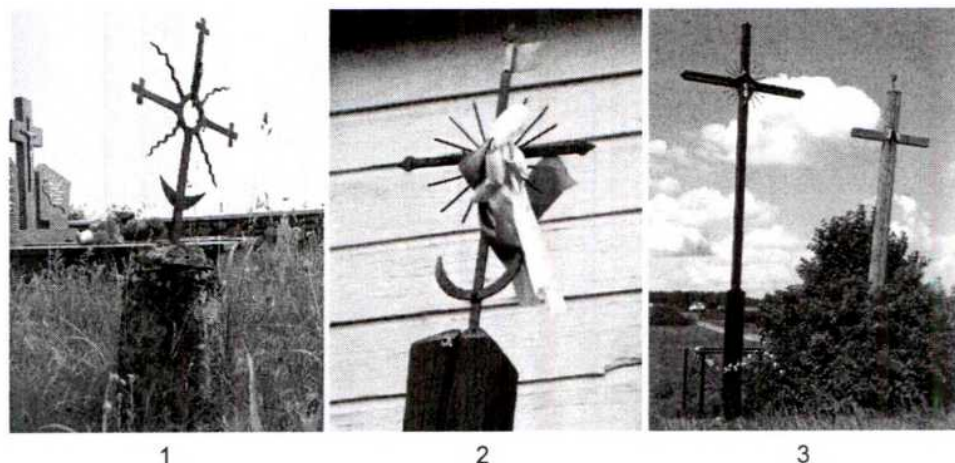


Fig. 16. Vanishing tradition

Explanation: 1 – graves at old cemetery in Gielczyn; 2 – iron cross tied with fabric due to eastern custom (Piaski village); 3 – new metal cross and old wooden one (Tykocin area)

Source: Developed by author

Crosses are worthy of preservation because they involve 300 years of regional tradition, a part of the local identity until WWII. Today, this tradition is disappearing. The symbol of the crescent was common here for all Christian inhabitants and Tatars, regardless of ethnos and rite, unifying all Podlasie people. This uniting symbol is the most valuable remnant of the interaction of multi-ethnic settlement in the cultural landscape of the Podlasie.

The crosses can be preserved by the following activities: (a) protection of remaining old wooden crosses; (b) replacing decayed crosses with stylish wooden ones, supplemented with iron cross; (c) recognition of crosses as a part of regional heritage (cultural park; see the clause 16 of Act of 23rd July 2003 On protection of monuments; Dz.U. z dnia 17 września 2003 r.); (d) making artefacts a promotional tourist attraction.

In the past, the Podlasie Region was an area of multi-ethnic settlement. The interaction of cultures resulted in new qualities, resulting in the emergence of a new regional culture. Remains of the settlement and cultural interactions still exist in the Podlasie landscape, but sometimes are hardly comprehensible. The most significant cultural relics of the past are roadside wooden crosses crowned with a small iron cross and embellished with a crescent. They symbolize faith, hope, life, love, fear, and humility. Their material durability appears to be greater than the collective memory of the locals. These days, the 300 years of

tradition falls into oblivion, but regional cultural heritage can be saved through tourism-related product and marketing. Investigated area is predisposed to bike tourism, and this offers further opportunity for the community. In peripheral, economically neglected areas like the study case, the remnants may become an impetus to develop the local economy through recreation and tourism. Furthermore, making new tourism products based on natural and cultural values can be a good opportunity to restore precious elements of the historical landscape.

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THE GOODS STRUCTURE OF TRADE BETWEEN POLISH REGIONS AND THE EUROPEAN UNION (1)

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ABSTRACT. The goal of this article is to present the structure of trade between Polish regions (voivodships) and the European Union. The research is a dynamic analysis making it possible to compare the time before and after the expansion of the European Union. The timeframe of the discussed issues relates to 1999–2007. Attention is paid to the scale and diversified nature of the changes to the goods structure of export and import activities undertaken by Polish voivodships to (from) the European Union. The analysis is preceded by the characteristics of the European Union's role in trade of specific regions. Finally, the degree of intra-industry specialization is evaluated as is the trend in changes to the trade between Polish regions and European Union countries.

KEY WORDS: European Union, Poland, goods structure, exports, imports.

INTRODUCTION

The continuing European integration has highlighted the importance of the issues of Poland's foreign trade in terms of regions. A region's position in the European Union is affected by, among other things, the ability to sell in foreign markets. The idiosyncrasies of the internal arrangement of Poland's foreign trade include high irregularity with respect to the intensity of trade, the geographic and goods structures. This irregularity manifests itself in voivodships (administrative regions of the 1st order) and poviats (administrative regions of the 2nd order) alike.

The goal of this article is to present the structure of trade between Polish regions (voivodships) and the European Union. The research is a dynamic analysis making it possible to compare the time before and after the expansion of the European Union. The timeframe of the discussed issues relates to 1999–2007.

Attention is paid to the scale and diversified nature of the changes to the goods structure of export and import activities undertaken by Polish voivodships to (from) the countries of the European Union. International specialization and trade rely primarily upon parallel exports and imports of highly processed goods. Hence the analysis is completed with an evaluation of the degree of intra-industry specialization and the trends in changes to the trade between Polish regions and European Union countries. In order to survey the goods structure of trade, CN classification was employed (Combined Nomenclature of Goods in Foreign Trade).

This type of analysis has been possible owing to materials made available by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw.

THE ROLE OF THE EUROPEAN UNION IN POLISH REGIONS' TRADE

Specific voivodships participate in national exports to the European Union (EU) in a diversified way (Fig. 1). The biggest shares of sales to the EU markets are enjoyed by the Śląskie, Mazowieckie, Dolnośląskie, and Wielkopolskie voivodships; in 2007 they represented in total 63% of the value of exported goods. With respect to voivodships' shares in the total Polish exports to the EU, the ranking list is further occupied by Pomorskie (6.6%) and Małopolskie voivodships (6.5%). Podlaskie voivodship has the smallest share in exports to the EU (0.8%).

It is worth noting that, in comparison to 1999, the share of the above-mentioned voivodships in Poland's exports to the EU markets has grown significantly: Dolnośląskie (by 4.5%), Śląskie (by 3.0%), Małopolskie (by 2.6%), and Mazowieckie (by 1.5%) voivodships. On the other hand, the shares of the remaining voivodships' exports declined (except for the Świętokrzyskie voivodship); the biggest change affected Zachodniopomorskie voivodship (by 2.1%). A comparison of the shares of specific voivodships in Poland's exports in 2007 to the EU consisting of 15 countries (EU-15) and 26 countries (EU-26) shows that, as a result of the expansion, the role of Mazowieckie voivodship grew, albeit slightly (growth by 1.2%) and that of Małopolskie voivodship (by 0.6%) in sales to the EU markets. On the other hand, Wielkopolskie voivodship experienced the biggest decrease (by 0.8%) (Fig. 1).

The fact that a given region's exports to the European Union are the biggest by value does not mean that this region's exports also enjoy a large share of sales to that group. This is why the presented data is worth complementing in order to present the share of the EU market in voivodships' exports (Fig. 2). The

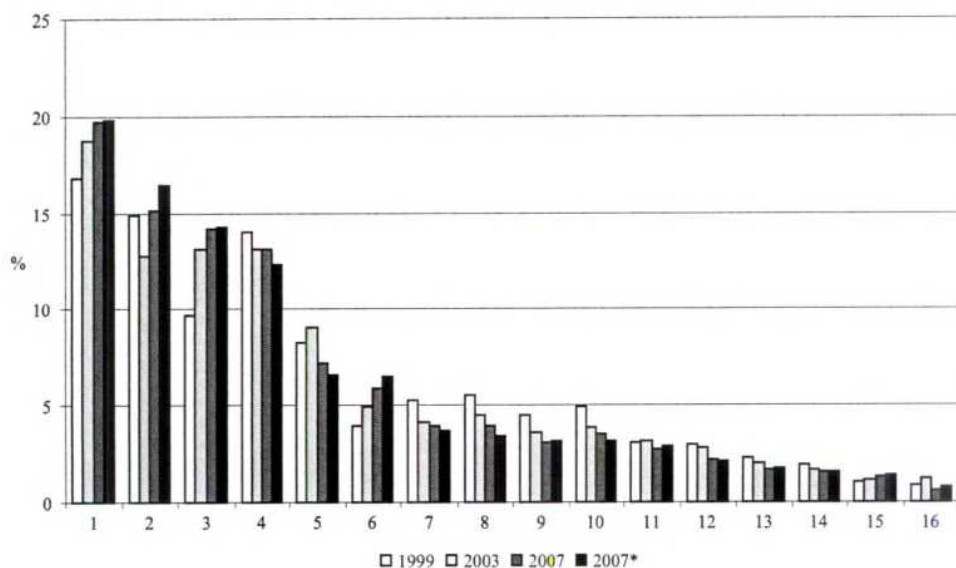


Fig. 1. Voivodships' shares in Poland's exports to the European Union (a) in 1999–2007
 Explanation: (a) – for 1999, 2003 and 2007 the notion 'European Union' is applied to 15 member countries and for 2007* to 26 countries; 1 – Śląskie; 2 – Mazowieckie; 3 – Dolnośląskie; 4 – Wielkopolskie; 5 – Pomorskie; 6 – Małopolskie; 7 – Kujawsko-Pomorskie; 8 – Zachodniopomorskie; 9 – Łódzkie; 10 – Lubuskie; 11 – Podkarpackie; 12 – Warmińsko-Mazurskie; 13 – Opolskie; 14 – Lubelskie; 15 – Świętokrzyskie; 16 – Podlaskie

Source: Author's own on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

European Union's share in regional exports (above 83%) was recorded in 2007 in Dolnośląskie, Śląskie, Opolskie, Lubuskie, and Wielkopolskie voivodships, i.e., mainly in western Poland. The significant importance of the EU in the export structure of Dolnośląskie, Lubuskie and Opolskie voivodships stems to a large extent from their border location and intense trade relations with Germany and other EU countries. The structure of the industry and the related sales to the EU markets affect to a large extent the EU's large share in exports in the case of economically strong regions, i.e., Śląskie (exports of passenger cars, metallurgical goods and coal) and Wielkopolskie (exports chiefly of electro-mechanical industry goods and furniture) voivodships.

The EU countries are least active in purchasing goods from Pomorskie, Podkarpackie, Podlaskie, Mazowieckie, and Lubelskie voivodships. What is conspicuous is the poor position of Mazowieckie and Pomorskie voivodships with respect to their ranking in Poland's total exports to the EU. In the case of

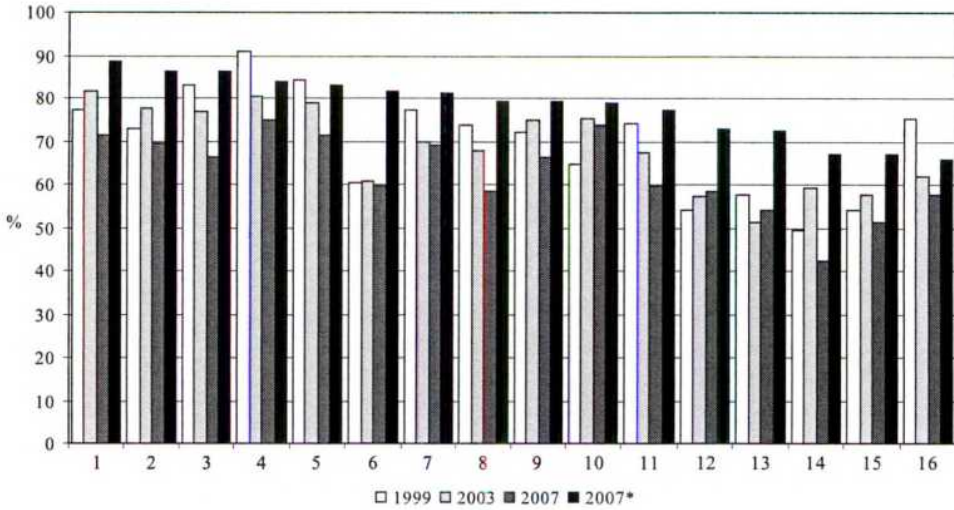


Fig. 2. Share of exports to the European Union (a) in the total exports in voivodships in 1999–2007

Explanation: (a) – for 1999, 2003 and 2007 the notion ‘European Union’ is applied to 15 member countries and for 2007* to 26 countries; 1 – Dolnośląskie; 2 – Śląskie; 3 – Opolskie; 4 – Lubuskie; 5 – Wielkopolskie; 6 – Małopolskie; 7 – Kujawsko-Pomorskie; 8 – Świętokrzyskie; 9 – Warmińsko-Mazurskie; 10 – Zachodniopomorskie; 11 – Łódzkie; 12 – Lubelskie; 13 – Mazowieckie; 14 – Podlaskie; 15 – Podkarpackie; 16 – Pomorskie

Source: Author’s own on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

Pomorskie voivodship, it results from the important role of Norway and the significant role of developing countries in the voivodship’s exports structure. The relatively small share of the EU in Mazowieckie voivodship’s exports is affected by a large extent of diversification of exports destinations typical of this region. On the other hand, the smaller involvement of the EU in eastern Poland regions’ exports (Podkarpackie, Podlaskie and Lubelskie voivodships) has been affected by the significant role of countries from Central and Eastern Europe (2), mainly Ukraine and Russia.

Fig. 2 shows that in 1999–2007 the biggest growth in exports to EU countries, accompanied by Poland’s average growth of 8.1% was enjoyed by exports from Małopolskie (by 21.0%), Lubelskie (by 18.8%) and Podlaskie (by 17.8%) voivodships. A drop by several per cent in EU’s share occurred at that time only in exports in Pomorskie, Lubuskie and Wielkopolskie voivodships. The process of expansion contributed to the growth of EU’s share in Poland’s exports

(by 15.8%) and all voivodships; the most spectacular growth by over 20% was recorded in exports from Podlaskie, Małopolskie, Świętokrzyskie, and Opolskie voivodships. Imports from the EU tend to be more spatially concentrated than exports.

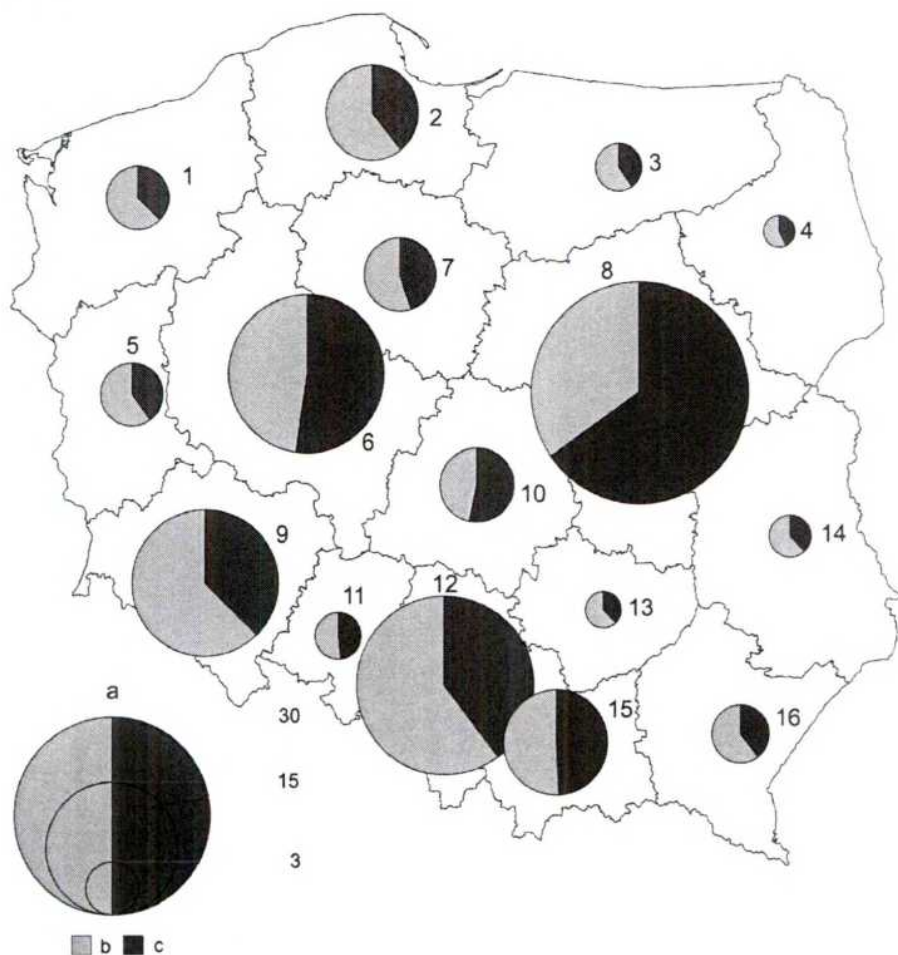


Fig. 3. Trade sales of Polish voivodships with 26 countries of the European Union in 2007

Explanation: a – sales in billions of Euro; b – exports; c – imports; 1 – Zachodnio-pomorskie; 2 – Pomorskie; 3 – Warmińsko-Mazurskie; 4 – Podlaskie; 5 – Lubuskie; 6 – Wielkopolskie; 7 – Kujawsko-Pomorskie; 8 – Mazowieckie; 9 – Dolnośląskie; 10 – Łódzkie; 11 – Opolskie; 12 – Śląskie; 13 – Świętokrzyskie; 14 – Lubelskie; 15 – Małopolskie; 16 – Podkarpackie

Source: Author's own on the basis of data supplied by the Analytical Centre of Customs Administration in Warsaw

In Poland's imports from the EU, Mazowieckie voivodship has been more active (32.6% of total imports value in 2007). It is followed by Wielkopolskie (14.3%) and Śląskie (13.8%) voivodships; the latter's role is significantly smaller than in the case of exports. Podlaskie voivodship tends to be least involved in imports from EU (0.6%) as it is the case with exports.

Since 2005, exports tended to dominate imports in Poland's trade with the EU. In 2007 trade with EU countries amounted to a total surplus of €3.2 billion. With respect to specific regions, only 3 voivodships showed deficits in trade with the European Union (Fig. 3). The biggest negative balance occurs in Mazowieckie voivodship, amounting in 2007 to €10.9 billion. By comparison, in another voivodship showing the next biggest deficit – Wielkopolskie voivodship – the deficit reached €0.9 billion. The biggest positive balance amounting to €5.1 billion is enjoyed by Śląskie voivodship. Such huge disproportions between Mazowieckie voivodship and the remaining voivodships stem from the fact that this voivodship and, most importantly, Warsaw, host the headquarters of the country's biggest companies and trade intermediaries operating all over Poland as well as seats of companies with foreign capital. As suggested by research conducted by the Foreign Trade Research Institute, the latter tend to be more imports-inclined than the domestic companies.

THE GOODS STRUCTURE OF POLISH REGIONS' EXPORTS TO THE EUROPEAN UNION

An analysis of the goods structure of Polish regions' trade with the European Union in 1999–2007 was conducted with reference to CN (3). In order to present the scale of changes to the structure, the ratio of structure transformation degree (Wp) was employed. It is calculated in the following mode:

$$Wp = \frac{1}{2} \sum_{k=1}^n |C_k^I - C_k^O|$$

Wp – the ratio of the degree of transformations of the goods structure in foreign trade (exports, imports),
 C_k^I – the share of the goods group (section) k in the total value of exports (imports) in the final year,
 C_k^O – the share of the goods group (section) k in the total value of exports (imports) in the initial year,
 k – the number of goods groups (sections), 1, 2, ..., n .

If the goods structure of trade has not changed, the ratio equals 0 while a total change in the structure equals 100.

Table 1. The index of transformation of the goods structure (Wp) in the trade between Polish voivodships and the European Union in 1999–2007 by goods group

Voivodship	A	B
Dolnośląskie	29.7	11.6
Kujawsko-Pomorskie	31.1	15.6
Lubelskie	19.1	21.2
Lubuskie	18.0	18.8
Łódzkie	33.0	17.4
Małopolskie	33.7	18.8
Mazowieckie	12.1	8.4
Opolskie	24.3	15.0
Podkarpackie	9.3	18.3
Podlaskie	32.7	22.5
Pomorskie	15.2	17.6
Śląskie	17.6	12.4
Świętokrzyskie	26.3	12.0
Warmińsko-Mazurskie	30.0	25.6
Wielkopolskie	15.1	9.9
Zachodniopomorskie	20.5	16.8

Explanation: A – Wp : voivodship's exports; B – Wp : voivodship's imports

Source: Own calculations on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

Table 1 presents the value of Wp ratios for Polish voivodships' trade with the European Union. The results lead to the conclusion that in 1999–2007 a significant evolution took place in the goods structure of trade between Polish regions and the EU. This resulted from, among other things, Poland's and 11 other countries' accession to the EU, a regionally diversified inflow of foreign direct investment, changes to the industry structure in specific voivodships and changes in demand in EU countries and the determining international prices.

In the period in question, changes to the exports structure tended to be more dramatic than to imports. A different situation occurred only in 4 voivodships: Lubelskie, Lubuskie, Podkarpackie, and Pomorskie (Table 1).

Fig. 4 presents the goods structure of voivodships' exports to the European Union in 1999–2007. In the case of 6 voivodships: Dolnośląskie, Kujawsko-Pomorskie, Lubuskie, Łódzkie, Małopolskie, and Opolskie, Wp indicator in relation to exports to the EU was affected by changes in shares of the same two goods groups, homogenous in direction. Transformations in the exports structure of the above-mentioned regions were primarily affected by a greater share in exports of electro-mechanical goods (especially in Małopolskie and Dolnośląskie voivodships) and a drop in the share of textile materials and goods

(biggest in Łódzkie voivodship). It is worth highlighting other changes in the exports structure in specific voivodships in this group, namely smaller shares of 'the remaining sections' (mainly wood and wooden products; stone products, ceramics, glass; pearls, precious stones, precious metals and products) – in exports

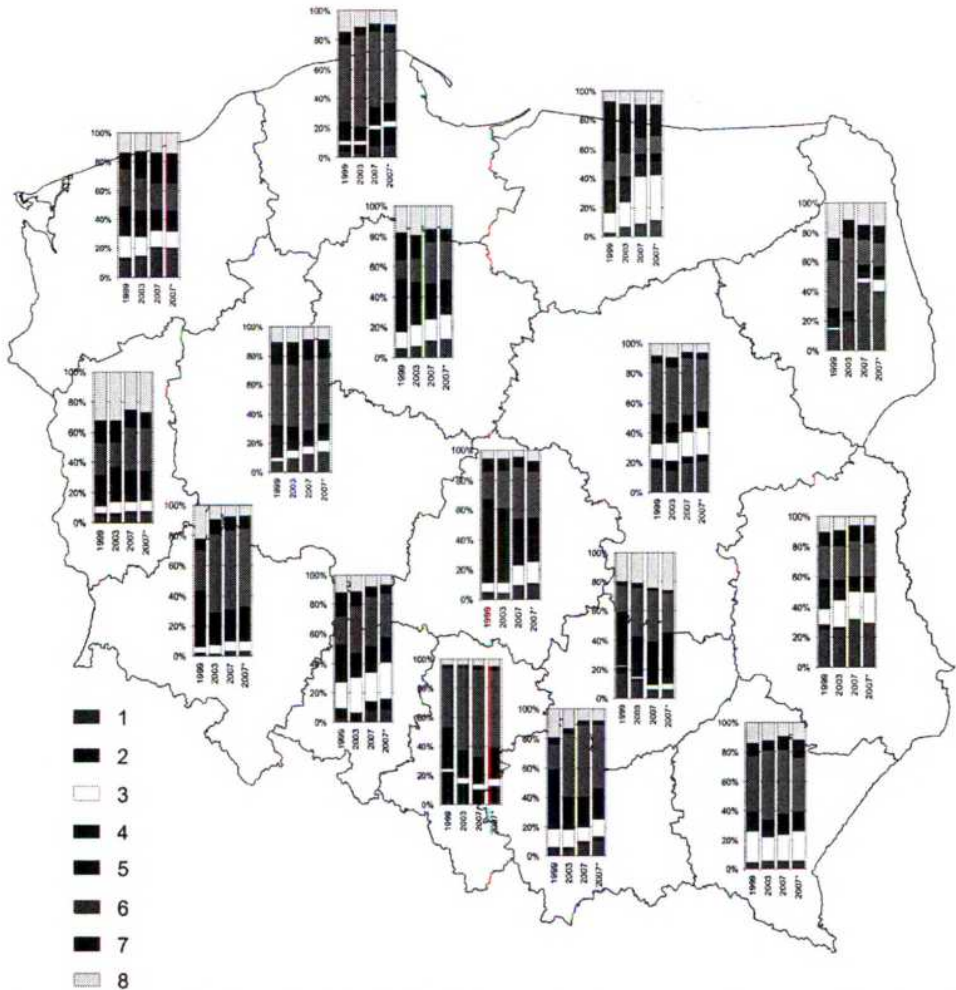


Fig. 4. Goods structure of voivodships' exports to the European Union (a) in 1999–2007
 Explanation: (a) – for 1999, 2003 and 2007 the notion 'European Union' is applied to 15 member countries and for 2007* to 26 countries; 1 – agri-food products; 2 – mineral products; 3 – chemical products; 4 – textile materials and products; 5 – base metals and related products; 6 – electro-mechanical products; 7 – various finished products: furniture, prefabricated houses, toys; 8 – other

Source: Author's own on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

of Dolnośląskie and Małopolskie voivodships, smaller shares of various finished products: furniture, prefabricated buildings, toys – in exports of Kujawsko-Pomorskie and Opolskie voivodships, smaller shares of base metals and related products – in exports of Małopolskie voivodship, bigger shares of chemical products – in exports of Opolskie and Łódzkie voivodships.

The most significant changes in the exports structure of Mazowieckie, Wielkopolskie and Lubelskie voivodships were related to smaller shares of textile materials and products accompanied by a bigger share of chemical products. Moreover, exports of Wielkopolskie voivodship were marked with a more conspicuous increase in the share of agri-food products.

Other types of changes, each time related to the same goods groups, yet different with respect to the direction, occurred in the exports structure of Śląskie and Pomorskie voivodships. In the case of Śląskie voivodship's exports, the size of Wp ratio was most prominently affected by a bigger share of electro-mechanical goods and a smaller share of mineral products. On the other hand, the degree of transformations in the goods structure of Pomorskie voivodship's exports stemmed to a large extent from increase in the share of exports of mineral products accompanied by decrease in the share of exports of electro-mechanical goods.

The level of Wp ratio with respect to exports of Świętokrzyskie, Podlaskie and Zachodniopomorskie voivodships has been mainly affected by changed shares of agri-food products, electro-mechanical goods as well as textile materials and products. The structure of exports of Podlaskie and Zachodniopomorskie voivodships was marked by a bigger share of agri-food products accompanied by smaller shares in the electro-machinery industry. As for exports from Świętokrzyskie voivodship, a drop was noticed in the share of agri-food products and bigger shares of electro-mechanical products. Exports from all three regions suffered smaller shares of textile materials and goods. Other noticeable changes to the structure of exports from specific voivodships in this group include: in Zachodniopomorskie voivodship's exports – bigger share of various finished products – furniture, prefabricated buildings, toys; in Świętokrzyskie voivodship's exports – bigger shares of base metals and related products, in Podlaskie voivodship's exports – bigger shares of chemical products and smaller shares of the 'remaining sections' (mainly wood and wooden products).

The degree of transformations in the exports structure of Warmińsko-Mazurskie voivodship in the time in question was primarily affected by a bigger share of exports of chemical products and agri-food products accompanied by a smaller share of various finished products (furniture, prefabricated buildings, toys) as well as textile materials and products. The Podkarpackie voivodship's exports structure was devoid of conspicuous change trends.

Among the 16 analyzed voivodships, in 1999–2007 the structure underwent the most significant change in exports from Małopolskie voivodship and the smallest in exports of Podkarpackie voivodship (Table 1). In 2007, for 11 voivodships, the most important group of goods in exports to the European Union was electro-mechanical products; they tended to play a special role in Śląskie (share of 53.7%), Dolnośląskie (52.4%) and Pomorskie (48.4%) voivodships. In two eastern voivodships, i.e., Lubelskie and Podlaskie, the exports structure was headed by agri-food products. Chemical products prevailed in exports from Warmińsko-Mazurskie voivodship while base metals and base metal products dominated exports from Świętokrzyskie voivodship. On the other hand, there was no dominance of any goods group in the structure of exports from Zachodniopomorskie voivodship, while three groups accounted for about 20% of the total export each: electro-machinery products, various finished goods (furniture, prefabricated buildings, toys) and agri-food products.

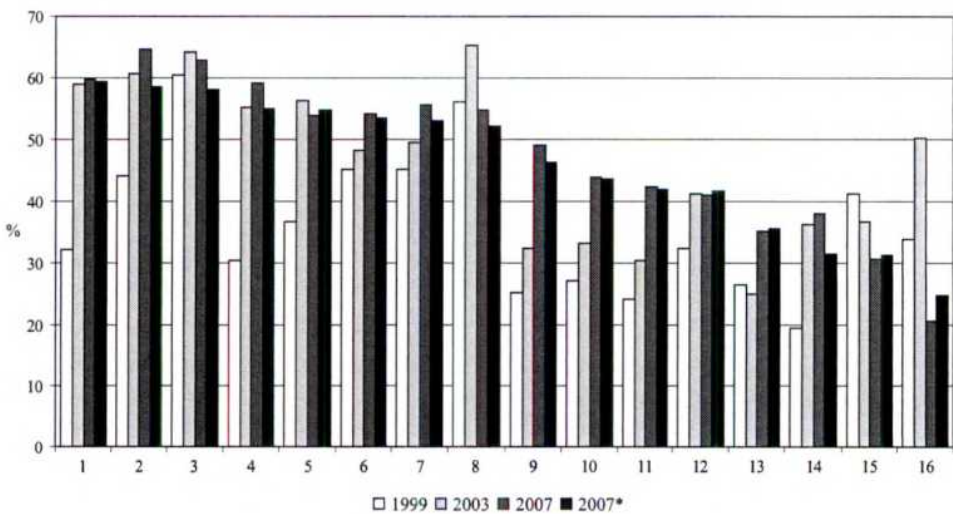


Fig. 5. Share of highly processed goods in voivodships' exports to the European Union (a) in 1999–2007

Explanation: (a) – for 1999, 2003 and 2007 the notion 'European Union' is applied to 15 member countries and for 2007* to 26 countries; 1 – Dolnośląskie; 2 – Śląskie; 3 – Podkarpackie; 4 – Małopolskie; 5 – Opolskie; 6 – Wielkopolskie; 7 – Mazowieckie; 8 – Pomorskie; 9 – Łódzkie; 10 – Warmińsko-Mazurskie; 11 – Kujawsko-Pomorskie; 12 – Lubelskie; 13 – Lubuskie; 14 – Świętokrzyskie; 15 – Zachodniopomorskie; 16 – Podlaskie

Source: Author's own on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

The structure of the goods is of great importance from the point of view of the regions' exports competitiveness. An economy capable of producing and selling highly processed, technologically advanced goods is in a most advantageous position. Bigger shares of modern goods in the exports offer allow to face international competition, especially from economically developed countries and to tap into inter-industry trade (Maćkowiak, 2007).

As indicated in Fig. 5, the biggest shares in exports of highly processed goods (4) to the EU in 2007 were enjoyed by Dolnośląskie (59.4%), Śląskie, Podkarpackie, Małopolskie, and Opolskie voivodships. On the other hand, voivodships with the smallest shares of such exports to the EU included Podlaskie (24.7%), Zachodniopomorskie and Świętokrzyskie voivodships. Dolnośląskie voivodship also enjoyed the biggest growth in share of exporting these products to the EU in the time under scrutiny (over 27%), followed by Małopolskie and Łódzkie voivodships. It was a positive phenomenon that the growth in share of processed and technologically advanced goods in exports to EU markets was recorded in as many as 12 voivodships. Highly processed goods lost their importance in the structure of exports to the EU in 4 voivodships, most acutely in Zachodniopomorskie voivodship (drop by 10%).

THE GOODS STRUCTURE OF POLISH REGIONS' IMPORTS FROM THE EUROPEAN UNION

Fig. 6 presents the goods structure of voivodships' imports from the European Union in 1999–2007. In 8 voivodships (Kujawsko-Pomorskie, Lubelskie, Lubuskie, Małopolskie, Podkarpackie, Śląskie, Świętokrzyskie, and Zachodniopomorskie voivodships) the transformations of imports from the EU were affected by changes in the shares of the same three goods groups, homogenous in direction. *Wp* ratio with respect to imports to the mentioned regions was mainly affected by a bigger share of base metals and related products (especially in Kujawsko-Pomorskie voivodship) accompanied by a drop of share in electro-machinery products (most acute in Podkarpackie voivodship) as well as textile materials and goods. The other changes to the structure of imports to specific voivodships in this group include: bigger shares of chemical products – in imports to Lubelskie and Podkarpackie voivodships, bigger shares of agri-food products – in imports to Lubelskie voivodship, bigger shares in mineral products – in imports to Małopolskie and Lubuskie voivodships, smaller share of mineral products – in imports to Zachodniopomorskie voivodship.

The extent of the changes to the structure of imports to Dolnośląskie voivodship was affected primarily by bigger shares of base metals and related products, while

there was no change in all the remaining groups of goods. The most important changes to the goods structure of imports to Warmińsko-Mazurskie, Łódzkie and Opolskie voivodships were related to a growth in the share of chemical products (the biggest in Warmińsko-Mazurskie voivodship) and a drop in shares of textile

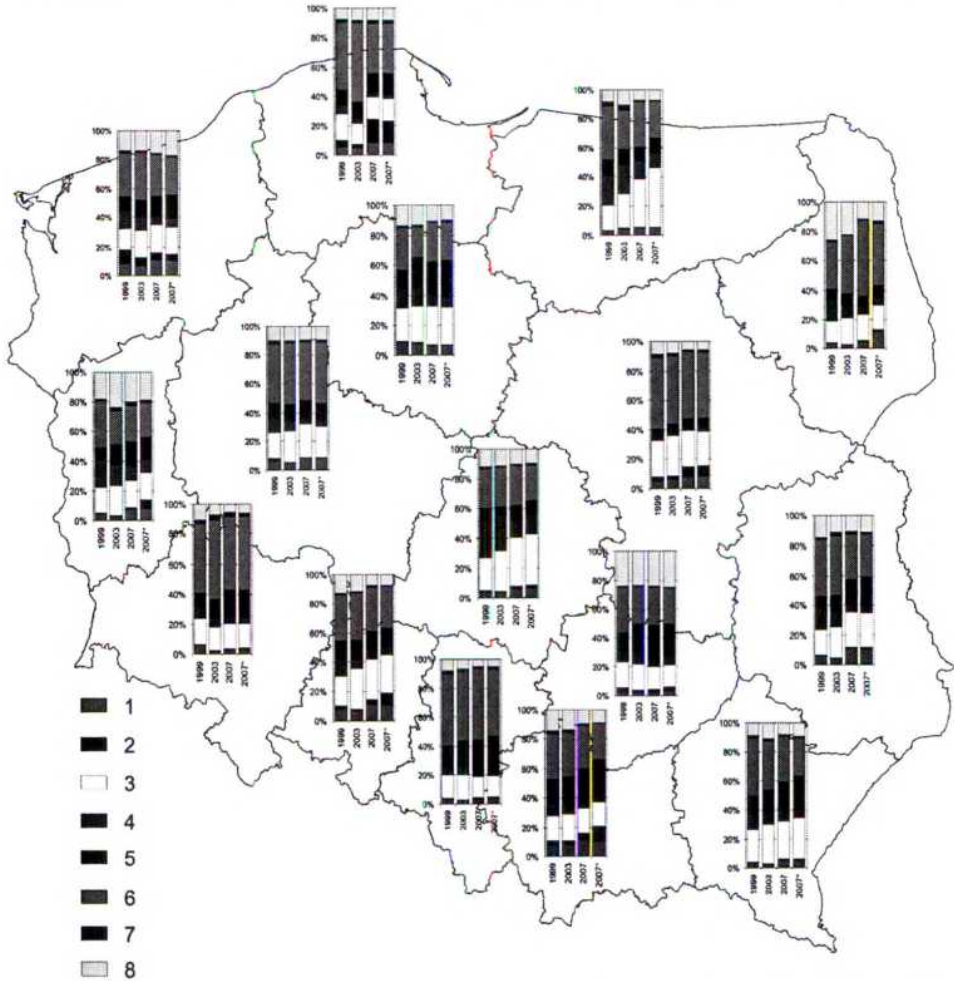


Fig. 6. The goods structure of imports to voivodships from the European Union (a) in 1999–2007

Explanation: (a) – for 1999, 2003 and 2007 the notion ‘European Union’ is applied to 15 member countries and for 2007* to 26 countries; 1 – agri-food products; 2 – mineral products; 3 – chemical products; 4 – textile materials and products; 5 – base metals and related products; 6 – electro-mechanical products; 7 – various finished products: furniture, prefabricated houses, toys; 8 – other

Source: Author’s own on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

materials and products (especially in Łódzkie voivodship). The other changes to the structure of imports to specific voivodships in this group include a sharp drop in shares of electro-mechanical goods in imports to Warmińsko-Mazurskie voivodship and a growth in the share of mineral products in imports to Opolskie voivodship.

On the other hand, a drop in shares of electro-machinery goods accompanied by a growth in share of mineral products were the biggest factors contributing to the size of Wp ratio in the case of imports to Pomorskie voivodship.

Other changes occurred in imports to Podlaskie voivodship: the extent of changes to the structure of imports to this voivodship was affected by a growth in share of electro-mechanical goods and agri-food products accompanied by a smaller share of textile materials and products and 'other sections' (mainly: groundwood, paper, carton, and related products).

Imports to Wielkopolskie voivodship were only marked by a smaller share of textile materials and products. The imports structure in Mazowieckie voivodship did not undergo any significant changes in the time under discussion.

Table 1 shows data indicating that in 1999–2007, the most profound changes to the structure among 16 surveyed voivodships affected imports to Warmińsko-Mazurskie voivodship while the least dramatic change occurred in imports to Mazowieckie and Wielkopolskie voivodships, i.e., regions leading in the country's total imports from the EU. As was the case with exports, in 11 voivodships electro-machinery goods were the most significant group of goods in imports from the European Union in 2007. The share of these products exceeded 40% in the structure of imports of the biggest importing voivodships (Dolnośląskie, Śląskie, Mazowieckie, and Wielkopolskie) and Podlaskie voivodship ranked last with respect to the value of imports from the EU. Chemical products had the greatest share in imports to three voivodships: Warmińsko-Mazurskie, Łódzkie and Podkarpackie. Imports to Małopolskie voivodship were dominated by basic metals and related products. On the other hand, the structure of imports to Kujawsko-Pomorskie voivodship was not marked with advantage of any group of goods, while three groups accounted for about 25% of the total import each: chemical products, electro-mechanical as well as base metals and related products.

Fig. 7 presents the share of highly processed goods in voivodships' imports from the EU in 1999–2007. In 2007 in 12 voivodships the share of these products in the imports structure proved bigger than that of the exports structure. Only 4 voivodships (Małopolskie, Pomorskie, Podkarpackie, and Opolskie) were in the opposite situation. Voivodships with the biggest share of highly processed goods in imports include Mazowieckie (68.6%), Warmińsko-Mazurskie, Dolnośląskie, Wielkopolskie, and Śląskie. The smallest share of imports of these goods was

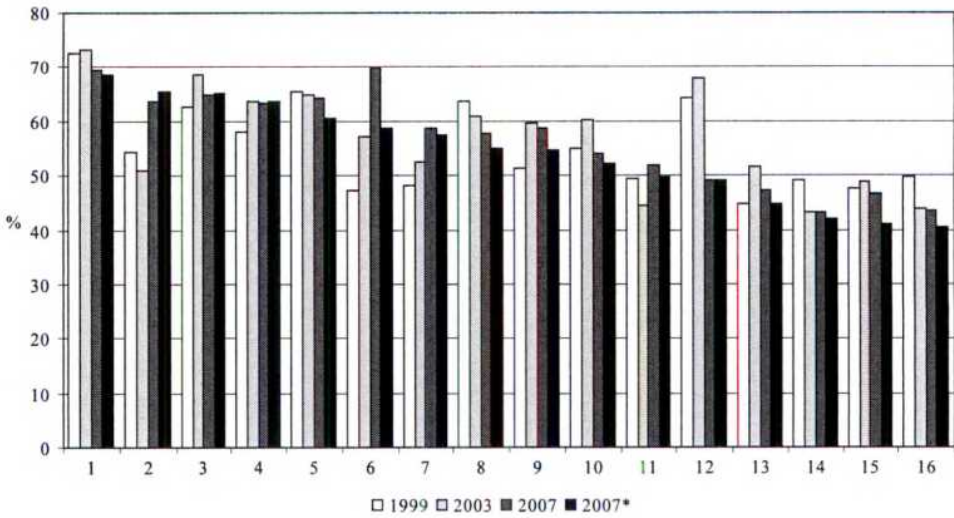


Fig. 7. The share of highly processed goods in voivodships' imports from the European Union (a) in 1999–2007

Explanation: (a) – for 1999, 2003 and 2007 the notion 'European Union' is applied to 15 member countries and for 2007* to 26 countries; 1 – Mazowieckie; 2 – Warmińsko-Mazurskie; 3 – Dolnośląskie; 4 – Wielkopolskie; 5 – Śląskie; 6 – Podlaskie; 7 – Łódzkie; 8 – Podkarpackie; 9 – Opolskie; 10 – Lubelskie; 11 – Kujawsko-Pomorskie; 12 – Pomorskie; 13 – Zachodniopomorskie; 14 – Lubuskie; 15 – Małopolskie; 16 – Świętokrzyskie

Source: Author's own on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

recorded in Świętokrzyskie, Małopolskie and Lubuskie voivodships. In the period in question, processed and technologically advanced goods became most prominent in the structure of imports to Warmińsko-Mazurskie and Podlaskie voivodships (growth in share by over 11%) while the biggest drop (over 15%) was recorded in imports to Pomorskie voivodship.

THE EXTENT OF INTRA-INDUSTRY SPECIALIZATION IN POLISH REGIONS' TRADE WITH THE EUROPEAN UNION

International specialization and trade rely primarily upon simultaneous exports and imports of highly processed goods. Hence, as a summary, I have evaluated the extent of intra-industry specialization in Polish regions' trade with the European Union.

According to J.L. Mucchielli and F. Celimene, the intensity of growth in international trade of intra-industry nature is affected by (Kundera, 1998: 69): (a) the partners' economic progress (the higher the level of development, the more diversified the demand, including more intense exchange of substitutes); (b) differences in levels of development (smaller differences in development between partners are conducive for intensifying the intra-industry division of labour); (c) the partners' higher economic potential makes it possible to benefit from economies of production scale in exchanging diversified goods; (d) the partners' growth rate, their production and demand structures (the more similar they tend to be, the more they contribute to the development of intra-industry rather than inter-industry specialization); (e) tariff barriers, extra-tariff, geographic barriers as well as costs of transport (the stronger the barriers, the weaker the stimuli to develop intra-industry specialization).

In order to evaluate the extent of intra-industry and inter-industry specialization and trends in Polish regions' trade with the EU, Grubel-Lloyd index was employed. It can be expressed as follows (Kundera, 1984; Zielińska-Głębocka, 1996; Maćkowiak, 2003):

$$B_i = \frac{\sum_{i=1}^n [(X_i + M_i) - |X_i - M_i|]}{\sum_{i=1}^n (X_i + M_i)}, \quad (5)$$

X_i – a voivodship's exports in section i to EU countries,

M_i – a voivodship's imports in section i to EU countries,

n – the number of sections considered.

The calculations were made for section CN with respect to 1999, 2003 and 2007. As Table 2 suggests, in 1999–2007, 13 out of 16 voivodships enjoyed growth in intra-industry specialization when trading with the EU. The strongest development of intra-industry specialization in trade with EU countries occurred in Mazowieckie voivodship, followed by Śląskie, Kujawsko-Pomorskie, Łódzkie, and Opolskie voivodships. Inter-industry specialization in trade with the EU slightly evolved only in Podkarpackie voivodship. The intra-industry specialization ratio for Lubuskie and Pomorskie voivodships did not change in the time of the analysis.

In 2007 the highest Grubel-Lloyd index – proof of intra-industry exchange with the EU – was enjoyed by Opolskie, Kujawsko-Pomorskie, Wielkopolskie, Łódzkie, and Małopolskie voivodships. Bearing in mind all voivodships, one can state that 1999–2007 witnessed a noticeable growth in intra-industry specialization

Table 2. Intra-industry and inter-industry specialization index in trade between Polish voivodships and the European Union in 1999–2007

Voivodship	A	B	C	D	E
Dolnośląskie	0.61	0.78	0.71	0.69	+0.08
Kujawsko-Pomorskie	0.67	0.76	0.80	0.79	+0.12
Lubelskie	0.50	0.52	0.56	0.55	+0.05
Lubuskie	0.68	0.71	0.70	0.68	+0.00
Łódzkie	0.64	0.69	0.76	0.76	+0.12
Małopolskie	0.66	0.79	0.75	0.73	+0.07
Mazowieckie	0.38	0.46	0.58	0.64	+0.26
Opolskie	0.70	0.76	0.81	0.82	+0.12
Podkarpackie	0.70	0.61	0.62	0.64	−0.06
Podlaskie	0.50	0.44	0.42	0.59	+0.09
Pomorskie	0.69	0.70	0.68	0.69	−0.00
Śląskie	0.54	0.67	0.68	0.68	+0.14
Świętokrzyskie	0.58	0.65	0.63	0.62	+0.04
Warmińsko-Mazurskie	0.54	0.54	0.59	0.64	+0.10
Wielkopolskie	0.68	0.72	0.71	0.77	+0.09
Zachodniopomorskie	0.61	0.59	0.62	0.64	+0.03

Explanation: A – 1999 (UE-15); B – 2003 (UE-15); C – 2007 (UE-15); D – 2007* (UE-26); E – change in years 1999–2007*

Source: Author's own on the basis of data supplied by the Analytical Centre of Customs Administration and the Centre of Information Technology of Foreign Trade in Warsaw

in trade between Polish regions and the EU. The growth in the intra-industry ratio indicates Poland's genuine integration with this group by aligning the structure of Polish exports to the EU with the EU's internal trade structure. However, the relatively low level of this ratio (in comparison with many EU member states) confirms the existing asymmetry in demand (disproportions in per capita GDP) and supply (a technology gap in the chemical industry) of factors boosting the intra-industry division of labour. Another unfavourable feature of the structure of the Polish exports to the EU is too small share of chemical industry products, plastics and plastic products, regarded as carriers of technological progress. Total imports from the EU in these sections are double the size of exports to the EU.

NOTES

- (1) Paper financed from science-supporting funds in the years 2007–2011 under a research project No. N N306 2508 33.
- (2) In compliance with the EUROSTAT geo-nomenclature, in 2007 the group of Central and Eastern Europe countries consisted of Albania, Belarus, Croatia, Moldova, Russia, and Ukraine.
- (3) The analysis of the goods structure was conducted with respect to CN classification (consisting of 21 sections) in line with the following 8 goods groups: agri-food products (sections 1–4, i.e., live animals and animal origin products; plant products; fats and oils; processed food), mineral products (section 5), chemical products (sections 6–7, i.e., chemical industry products; plastics and objects made of plastic), textile materials and goods (section 11), base metals and base metal products (section 15), electro-mechanical products (sections 16–18, i.e., machines and devices, electric and electronic equipment; transport equipment; optical, photographic and measurement and control instruments), various finished goods – furniture, prefabricated buildings, toys (section 20) and ‘other sections’ (sections 8–10, 12–14, 19, 21 and 0, i.e., skins and leather products; wood and wooden products; groundwood, paper and carton plus paper and carton products; shoes and hats; stone goods, ceramics, glass; pearls, precious stones, precious metals and goods; weapon and ammunition; works of art, collectors’ artefacts, antiques; other unspecified goods).
- (4) With respect to CN classification, highly processed goods have been classified within 6 following sections: 6 (chemical industry products), 7 (plastics and plastic products), 16 (machines and devices, electric and electro-technical equipment), 17 (transport equipment), 18 (optical, photographic and measure and control instruments and apparatuses) and 19 (weapon and ammunition).
- (5) B_i ratio changes in the 0–1 brackets. B_i amounts to 1 when imports equal exports in every goods section considered which relates to the region’s full intra-industry specialization. B_i ratio amounts to 0 when exports (imports) are not accompanied by imports (exports) in trade within specific goods sections. This, in turn, relates to regions with full inter-industry specialization. The ratio may also indicate the evolution of specialization in international trade. The ratio’s growth (up to or within the 0.5–1 bracket) in a given time is to indicate development of intra-industry specialization while its decline (in the 0–0.5 brackets or up their level) indicates development of specialization of inter-industry nature.

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DEMOGRAPHIC SITUATION AND THE LEVEL OF HUMAN DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN: REGIONAL ASPECTS

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ABSTRACT. The objects of research are indicators of human development in Kazakhstan from the moment of independence acquisition by the republic until today. The subject of scientific research is spatial-existential patterns of socio-demographic processes as a key factor of human potential development in the Republic of Kazakhstan. The importance of scientific work is that the results permit to estimate the level of human development of the Republic of Kazakhstan on the basis of socio-demographic processes. For the first time the basic indicators defining human potential in Kazakhstan have been studied in detail and systematized. The aim of the work is to define the laws of the spatial organization of human potential and its basic spatial analyses of human development of Kazakhstan. The database, created with the help of ArcGIS, allows to monitor the changes of human development level, to analyze, estimate and manage human potential of the Republic of Kazakhstan.

KEY WORDS: Kazakhstan, demographic situation, human development.

INTRODUCTION

The demographic factor is dominant in social and national development of any country. Therefore, without scientific analysis at all regional levels it is impossible to make realistic projections of economic and social development of the country and its regions. The problem of demographic development in Kazakhstan is particularly important.

Kazakhstan – is one of the largest in land area and is an economically developed nation on the Eurasian continent, which has diversified industry and agriculture. The country's economy is greatly influenced by development

in global economy. Kazakhstan has developed a stable political and economic relation with neighbouring countries, of which the greatest importance to the country have links with Russia and China. Moreover, in recent years the attention has been drawn to the more efficient use of the boundary potential of Kazakhstan and Russia, whose boundaries are the longest in the world. The republic belongs to several international organizations, including the EurAsEC and the CSTO, which gives it preferential treatment in economic development.

Population density of the neighbouring states is very high compared with our country. This indicator in Kazakhstan, which is located on the border with overcrowded China, Central Asia, and near the demographic surplus of the Middle East and South Asia, remains the lowest (only 6 people per 1 km², as of 2010) in the CIS (Commonwealth of Independent States including Russia, Georgia, Moldova, Ukraine, Belarus). Given the low population growth compared with other Asian countries, Kazakhstan will continue a lack of its human capital because of emigration of European ethnic groups. Therefore, the demographic problem will continue to be the most pressing issue of political and economic development.

The objects of research are indicators of human development in Kazakhstan from the moment of the republic's independence until today. The subject of research are spatial-temporal patterns and regional features of the development of socio-demographic processes, forming the human potential of the country. The estimation of human potential is an important element of socio-economic development, because the account of demographic indicators allows to improve the quality of life of the population in Kazakhstan.

According to the objective of the research the following tasks were performed: (a) spatial analysis and estimation of the level of human development within the framework of national demographic policy of the Republic of Kazakhstan with the use of the international and domestic experience; (b) the study of geo-demographic processes and the definition of the main tendencies of the natural and mechanical movement of the population of the republic; (c) comparative analysis of the features of the human development in different types of settlement and in gender aspect with the help of the geographical information system.

There is a need to research such parameters as the quality of life of the population of Kazakhstan in accordance with international standards of human development through the prism of social and demographic processes. In this respect, economic and geographical study and the level of human development estimation based on the analysis of socio-demographic processes in the Republic of Kazakhstan help to develop a set of social measures to improve the demographic situation of the country, which is one of the priority direction of fundamental research in the country for 2010–2030.

In the methodological and information bases of scientific work the methodology of the geographical science of national and foreign authors has been used. In this work general scientific methods have been used, also modern methods of research, systematic and comparative-geographical analyses, methods of mathematical statistics, correlation-regression analyses, methods of GIS technologies and others.

In foreign economic studies, the most significant methodological contributions to the study of human development and quality of life have had the works of K. Griffin, A. Sen, P. Townsend. Different aspects of human development, such as modern economic welfare theory, the foundations of social development, human capital and quality of life, have been the concern of economists, sociologists and geographers in Russia and the CIS: A.I. Alekseev, E.M. Andreev, A.G. Granberg, A.P. Katrovsky, V.P. Kolesov, SA Kovalev, T.G. Nefedova, E.N. Persik, B.B. Prokhorov, N.M. Rimashevskaya, I.A. Rodionova, R.V. Ryvkina, A.A. Sagradov, A. Saliev, V.S. Tikunov, A.I. Treyvish, A.G. Vishnevsky, T.I. Zaslavskaya, J.A. Zayonchkovskaya, N.V. Zubarevich, and others.

Important contributions to improving the methodology for assessing human development in relation to the conditions of our republic have also been made by scientists and specialists from Kazakhstan, such as U.M. Iskakov, M.B. Kenzheguzin, A.K. Koshanov, N.K. Mamyrov, M.K. Meldahanova, Sh.M. Nadyrov, O.S. Sabden, S.S. Satubaldin, B.A. Tatibekov, M.B. Tatimov, Y.K. Shokamanov, and others. Many of them were authors, experts and consultants in the preparation of national reports on human development.

The information base of research includes laws and legal documents of the Republic of Kazakhstan, official publications of the Agency of Statistics of the Republic of Kazakhstan, materials of the Ministry of Education and Science of the Republic of Kazakhstan, annual reports and national reports on human development of the Programme of Development of the United Nations Organization, the monographic and periodic literature on the investigated problem.

DEMOGRAPHIC SITUATION OF THE REPUBLIC OF KAZAKHSTAN

It should be emphasized that the above-mentioned studies are mainly dedicated to purely economic, sociological or geographical aspects of human development at the global and regional level. In general, modern geographical science has not developed methodology and techniques of complex economic and geographical studies of human development in the globalizing world economy yet.

Significant impact of the outflow from the country has led to the decrease in population (in total more than 1.7 million people has emigrated over the first 10 years of a sovereign state). Those who left were highly skilled and at working age that respectively influenced the change in age, education and employment structure of the population. According to the 1999 Census, the population was 14.95 million people. The latest census (2009) in the country recorded 16.0 million people; over the past 50 years the whole population has grown by 6.7 million people, or rather with in comparison to the previous census has increased by 1.05 million. During the period of the independent state the republic's population declined by 353.4 thousand people, not reaching the 1991 level, and it should be noted that this demographic trend was typical for other countries of the CIS where during the first 10 years after the collapse of the USSR population number declined.

Kazakhstan pursues its economic policies in line with the ideology of human development, proclaimed by the UN. Sustained improvement in the quality and social standards of living of the population defined by the President of the country is among the main priorities to achieve the objective of the 50 most competitive countries in the world. According to the Human Development Report (UNDP), Kazakhstan and other CIS countries are characterized by two stages of human development. In the first stage (1990–1995) there was a sharp worsening of all basic human development indicators, which led to the displacement of Kazakhstan, from 54th to 93rd place in the world Human Development Index (HDI). In the second stage (1995 to present) human development indicators are being restored and it will enable Kazakhstan to move 13 positions higher. However, demographic processes are delayed in relation to socio-economic development for about 9–10 years, forming a demographic lag.

Factors which caused the negative trends in human development in the first stage should include: population decline as a result of emigration, especially in the initial years of the state, reduction in fertility (at least by 25% for Central Asian countries), a sharp decline in life expectancy due to declining demographic investment. According to our calculations demographics – mainly life expectancy at birth – played a major role in the deterioration of human development indicators of the republic at the first stage and is not a weighty factor in the growth of this indicator in the next step. Moreover, its level in Kazakhstan is very low (68.6 years) compared with countries with high rates (78 years). In order to be in a top of 50 countries by HDI (to occupy the 43rd place), a life expectancy in Kazakhstan must be higher than now by 10 years.

The analysis of the dynamics of key components of the HDI in the post-Soviet countries in 1990–2009 suggests that one of the main indicators is a life expectancy. The average in the former Soviet Union is about 74 years. The longest

life expectancy is in Georgia (in average 76.7 years). The lowest life expectancy is in Tajikistan – 65.3 years. In Kazakhstan, life expectancy in 2009 reached 68.6 years, which corresponded to the 1990 level.

The President's of Kazakhstan 'Kazakhstan-2030' Concept of Transition of Kazakhstan to Sustainable Development for 2007–2024 put forward the objective of increasing the country's population to 18 million people by 2024. This requires an increased rate of natural increase to 15.0 per 1,000 population in 2024, life expectancy – 75 years, birth rate to be maintained at not less than 22 births per 1,000 population. The gap in life expectancy of male and female population should be reduced to 7.5 years from the current 10 years.

Problems of human reproduction attract the attention of both specialists and the general public, thus gaining increasing importance in connection with the implementation of the most important tasks of demographic policy – to achieve optimum rate of population reproduction. Since independence was gained, the social and demographic development of the republic can be divided into three stages. The first stage (1991–1997) is characterized by a complex situation in the economic and social sphere. The population of the republic during this period decreased from 16.4 to 14.0 million people. This is a result of a decrease in birth rate and stable level of migration from Kazakhstan to other countries. Since 1992 the trend of overall population decline was fixed. In the second period (1997–2003) there was a certain stabilization of the socio-economic sphere, which led to a decrease in the dynamics of some negative trends. At that stage, the foundations were laid for further improvement of the socio-demographic indicators. In the third period (2003 – present) due to improved economic development and the objective demographic factors in Kazakhstan the socio-demographic situation is characterized by positive trends and the growth of many indicators.

Social and demographic development of the Republic of Kazakhstan since 1997 is largely defined as an objective process and rapid economic development. As a result of the changes in recent years the socio-demographic situation can be evaluated as favourable: improving fertility rates and life expectancy, reduced overall mortality, a positive balance of migration. Sex and age structure has significant influence on the future trends of population reproduction. This is an important structural component of the population in Kazakhstan and in various age groups. The analysis performed in the research dissertation has shown that the total fertility rate in the country declined from 22 in 1991 to 15‰ in 1999, while fertility decline occurred in all areas. And only in 2009, it increased and reached the 1991 level – 22‰ (Fig. 1). The highest fertility rates were observed in South Kazakhstan and Mangystau (32‰), and the lowest birth rate – in the North Kazakhstan region (14‰).

One of the main problems of the demographic situation in the country is high mortality rate, which in previous years was one of the lowest among the Soviet republics. Death rate more than birth rate depends on the level of socio-economic development, wealth and health care. In 1991–2009 in Kazakhstan 2.9 million people died. In the territorial aspect, high mortality rates were reported in Akmola, Karaganda, Kostanay, East Kazakhstan, and North Kazakhstan regions (oblasts), i.e., 11–12 for 1,000 population (2009). In some of these areas, the number of deaths exceeded the number of births, so depopulation was observed.

The general rate of natural increase over the study period averaged 14 people per 1,000 population (or 14‰) in 1990; 5‰ – in 1999; 13‰ – in 2009 (Fig. 1). The highest rates of up to 2009 registered in Mangystau and South Kazakhstan regions, respectively, amounted to 26 and 23‰, and the lowest ones were noticed in the North Kazakhstan and Kostanay regions – 1 and 2‰. In these areas, in 2007 there was a natural decline in population. Relatively low rates of natural increase are typical for Akmola, Karaganda, Pavlodar, and East Kazakhstan regions (5–6 ‰).

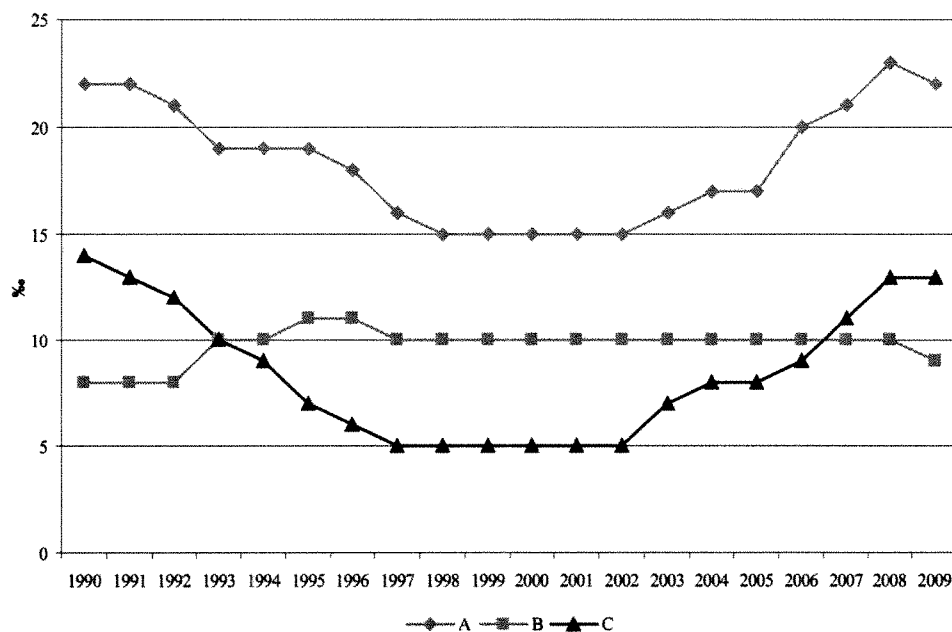


Fig. 1. Birth rate, death rate and natural growth rate in the Republic of Kazakhstan in 1990–2009

Explanation: A – birth rate; B – death rate; C – natural growth rate

Source: Agency of Statistics of the Republic of Kazakhstan

The acquisition of independence by Kazakhstan in 1991 connected with the beginning of transformation processes in the space of the former Soviet Union and the return of some ethnic groups to their historical native land (homeland) caused in Kazakhstan and in many other CIS countries the trend of the growth of negative migration balance. So, for the first 10 years of independence, migration balance not only completely absorbed natural population growth of this period, but exceeded it by more than two times. Negative balance for 1991–2003 totalled 2.2 million people as a whole in 1991–2009. The number of emigrants from Kazakhstan reached 3.4 million people. And only since 2004 in the republic there has been positive net migration.

Migration decline in 1994 was the highest and exceeded 400 thousand, net migration rate was minus 25 people per 1,000 population. In this case, the largest decline in population occurred in industrial areas – Karaganda, East Kazakhstan, Akmola, Kostanay, North Kazakhstan. The main flow of emigration from Kazakhstan was to the CIS countries, about 2/3 of which came from Russia. Among the CIS countries the greatest flow of emigrants was to Germany, i.e., 90–95% of all emigrants.

Over the last decade, i.e., in the intercensal period of 1999–2009, life expectancy increased for the whole country by 3 years (for men – by 3 years, for women – by 2.6 years). Respectively, in 2009 average life expectancy was 68.6 years; for male – 63.6 years; for women – 73.5 years. The difference in life expectancy between men and women at birth was 9.3 in 1989 and 9.9 years in 2009, exceeding the highest values of life expectancy of women which were observed in the republic in 1996 (11.7 years) and 2007 (11.9 years). In countries with high life expectancy, which are in the best conditions and are characterized by slowly ageing and dying population, this difference is not more than 7–8 years. For example, in Japan the life expectancy of women has reached 84 years, and of men – 77 years. In Sweden and France life expectancy for women was 83 years in 2009 (for men – 77 and 75 years respectively).

Spatial analysis of life expectancy by gender shows the high life expectancy of the rural population compared with urban population. Thus, the highest life expectancy of the male population of the village in Mangistau and South Kazakhstan regions equals above 67 years, and for the rural female population in Mangistau region this figure reaches 77 years. In urban areas the maximum life expectancy is lower than in rural ones (for men – about 63 years, for women – 74 years). All these socio-demographic characteristics of the population have a significant impact on human development indicators. We have conducted a multivariate demographic forecast for the Republic of Kazakhstan, which is based on dynamic historical series of population taken for 1990–2010 years.

By use of the software ArcGIS 9.3 we have compiled a series of maps of demographic, socio-economic and other indicators for the Republic of Kazakhstan in the context of urban and rural areas from a gender perspective. Formed geodatabase is a model that reveals the spatial-temporal changes in human development indicators in Kazakhstan. The GIS database was formed on a reported and stock research materials. In the geodatabase 'Geodemography of Kazakhstan' all the spatial objects are represented in the real geographic coordinates, as objects with attributes that are combined into classes (feature class) with similar geometry: point, line or polygon on the subtype (subtype). Classes of spatial objects, in turn, are combined into sets of classes of objects (feature dataset), e.g., 'Demography', 'Geographical Basis', 'Education', etc. The vector map layers were connected to a relational database in Access and were recorded on a structured hierarchy of the data.

Creating GIS 'Socio-demographic processes in the Republic of Kazakhstan' with the use of ArcGIS technology programme allowed for the spatial-temporal monitoring of evolving geo-demographic situation of Kazakhstan's regions. As a result, provided analytical support for management decisions for the development of measures aimed at regulating social and economic processes. Thus, for contemporary scientific and practical tasks the required data on the population does not refer to large administrative units, but small territorial entities. Based on studies of small groups, aimed at identifying the factors of human behaviour, one can restore the social detail of all statistical aggregates, which experts used in their work so far, i.e., country, region, many human contributors.

This new research paradigm designed to study relatively small human communities, in contrast to Kazakhstan, is already explained at least two decades by demographers, economists, sociologists from foreign universities. There is a need for a statistical study of patterns of demographic processes in Kazakhstan at the municipal level that can be done with the help of GIS database. Without such an organization statistics it is impossible to conduct not only qualitative socio-economic studies, but, in particular, to achieve appropriate development level of local (municipal) governments.

THE LEVEL OF HUMAN DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN

It is performed multivariate demographic forecast of the Republic of Kazakhstan, which is based on the analysis of the trends of human development in 1990–2010. The analysis of the regional features of human development formation reveals that the level of the HDI and income is highest in Atyrau (0.939

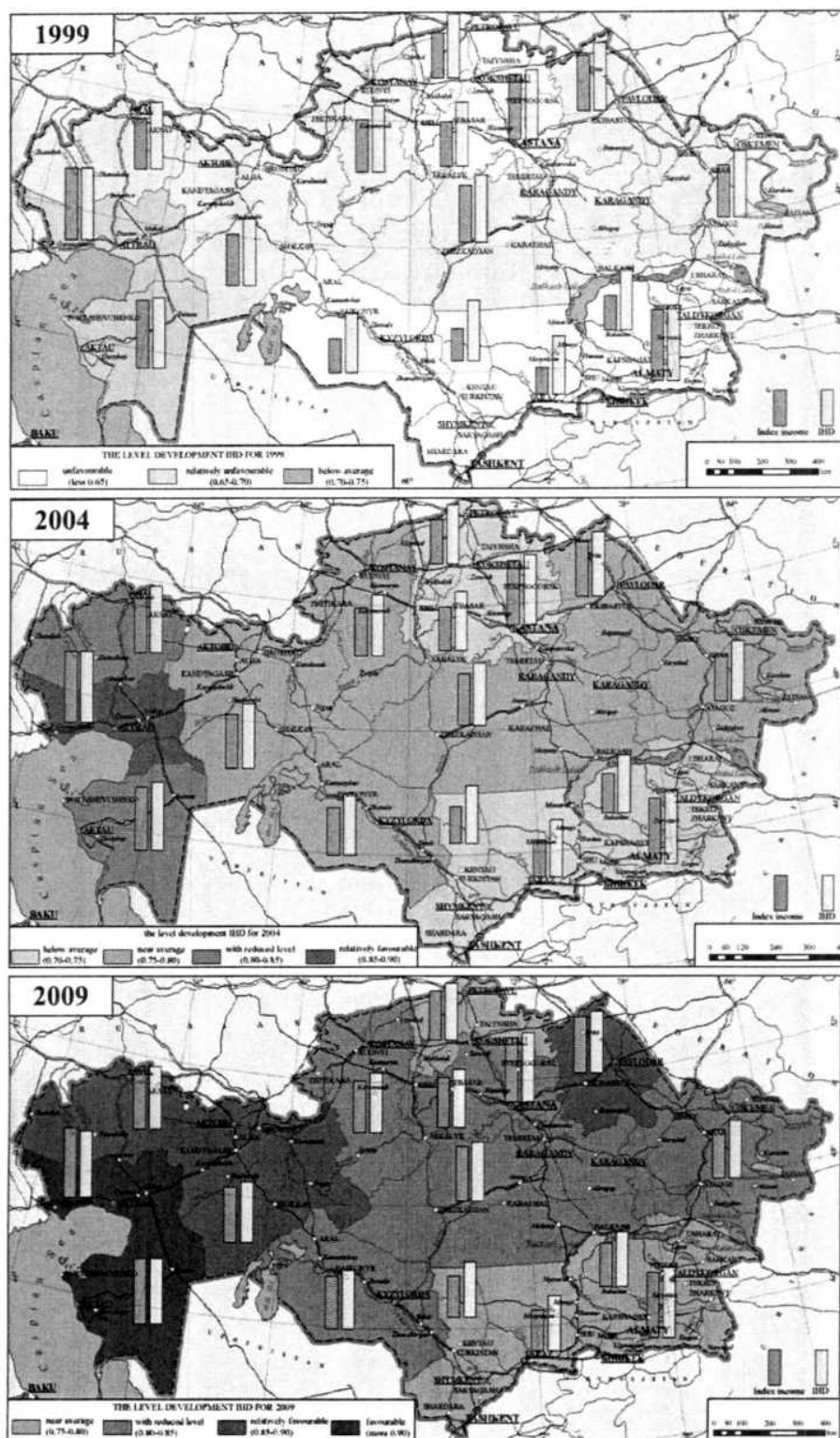


Fig. 2. Typology of regions of the Republic of Kazakhstan by the level of human development

Source: Calculated and formed by Agency of Statistics of the Republic of Kazakhstan

and 1.186), Mangystau (0.909 and 1.096, respectively) and in Almaty and Astana. These regions belong to a type of human development called 'prosperous'. HDI is low in Zhambyl (0.770 and 0.686), South Kazakhstan (0.779 and 0.699) and Almaty region (0.775 and 0.737, respectively). This type of regions is called 'close to the average level' (Fig. 2, Table 1).

Table 1. IHD indicators and indices of revenue by regions of the Republic of Kazakhstan, for 1999–2009

Region	A			B		
	a	b	c	a	b	c
Akmola	0.647	0.728	0.802	0.406	0.634	0.836
Aktobe	0.683	0.797	0.859	0.479	0.781	0.942
Almaty	0.625	0.713	0.775	0.316	0.567	0.737
Atyrau	0.736	0.884	0.939	0.662	1.032	1.186
East Kazakhstan	0.675	0.753	0.812	0.481	0.677	0.821
Karagandy	0.685	0.776	0.839	0.522	0.752	0.935
Kostanay	0.671	0.758	0.825	0.477	0.698	0.863
Kyzylorda	0.623	0.769	0.844	0.317	0.695	0.891
Mangystau	0.728	0.849	0.909	0.630	0.920	1.096
North Kazakhstan	0.651	0.732	0.798	0.413	0.638	0.829
Pavlodar	0.684	0.798	0.852	0.500	0.787	0.940
South Kazakhstan	0.627	0.723	0.779	0.302	0.538	0.699
West Kazakhstan	0.675	0.822	0.864	0.464	0.846	0.955
Zhambyl	0.603	0.711	0.770	0.253	0.532	0.686

Explanation: A – IHD; B – index of income; a – 1999; b – 2004; c – 2009

Source: Calculated and formed by Agency of Statistics of the Republic of Kazakhstan

The level of life expectancy with an index of longevity 0.70–0.75 (type below average) is 75% of the total population of the republic, while the indices of income and education of the vast majority of regions belong to the levels of relatively safe and prosperous, that is, with an index of more than 0.85. The typology (Table 2, 3) helps to formulate strategic mission priorities in the limited human resources: to 'pull' the weakest regions, financing least prosperous regions, or allocate resources more equitably, ensuring thus noticeable increase in human development level in less critical regions where the depth of problem is not so significant. It seems that the second way is more efficient in terms of raising the level of human development.

Table 2. The main indicators of socio-economic development and index of human development by regions of Kazakhstan in 1999-2009

Regions	A		B		C		D		E		F		G	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b
Kazakhstan	65.63	68.60	99.4	99.6	886.9	6,893.9	0.677	0.726	0.883	0.911	0.474	0.919	0.678	0.852
Akmola	64.38	66.21	99.4	99.6	647.4	4,700.7	0.656	0.687	0.878	0.883	0.406	0.836	0.647	0.802
Aktobe	65.25	68.21	99.6	99.8	907.3	7,643.5	0.671	0.720	0.899	0.914	0.479	0.942	0.683	0.859
Almaty	66.74	68.57	99.7	99.5	428.5	2,973.5	0.696	0.726	0.864	0.863	0.316	0.737	0.625	0.775
Almaty city	67.98	72.24	99.8	99.8	2,071.5	15,159.2	0.716	0.787	0.954	1.084	0.658	1.090	0.776	0.987
Astana city	67.60	75.74	99.7	99.7	1,606.6	13,383.7	0.715	0.846	0.848	0.962	0.603	1.063	0.725	0.957
Atyrau	63.86	68.21	99.5	99.7	2,109.5	23,572.8	0.648	0.720	0.898	0.911	0.662	1.186	0.736	0.939
East Kazakhstan	64.93	67.22	99.5	99.5	916.8	4,386.4	0.666	0.704	0.878	0.911	0.481	0.821	0.675	0.812
Karagandy	63.90	66.87	99.5	99.5	1,105.1	7,399.3	0.648	0.698	0.884	0.883	0.522	0.935	0.685	0.839
Kazakhstan	65.63	68.60	99.4	99.6	886.9	6,893.9	0.677	0.726	0.883	0.911	0.474	0.919	0.678	0.852
Kostanay	64.99	67.75	99.5	99.6	898.5	5,321.1	0.667	0.713	0.870	0.898	0.477	0.863	0.671	0.825
Kyzylorda	65.43	67.45	99.6	99.5	430.7	6,061.2	0.674	0.708	0.879	0.933	0.317	0.891	0.623	0.844
Mangystan	64.35	68.33	99.7	99.6	1,821.2	15,588.4	0.656	0.722	0.899	0.908	0.630	1.096	0.728	0.909
North Kazakhstan	65.14	67.32	99.3	99.2	668.6	4,539.5	0.669	0.705	0.872	0.862	0.413	0.829	0.651	0.798
Pavlodar	65.14	67.95	99.4	99.4	998.5	7,584.4	0.669	0.716	0.882	0.899	0.500	0.940	0.684	0.852
South Kazakhstan	67.13	69.49	99.8	99.9	401.5	2,494.6	0.702	0.742	0.877	0.895	0.302	0.699	0.627	0.779
West Kazakhstan	65.23	68.61	99.4	99.4	847.4	8,136.7	0.671	0.727	0.891	0.909	0.464	0.955	0.675	0.864

Explanation: A – life expectancy; B – literacy rate; C – income per capita; D – index of longevity; E – index of education; F – index of income; G – HDI; a – 1999; b – 2009

Source: Agency of Statistics of the Republic of Kazakhstan, Human Development Report 1999-2010 – published for the United Nations Development Programme (UNDP), New York, USA

Table 3. Type of regions by human development level and index of income of Kazakhstan in 2009

Types and numbers of regions	I	II	III	IV
Unfriendly (0.60–0.65)	–	–	–	–
Average to unfriendly (0.65–0.70)	–	2	2	–
Below medium level (0.70–0.75)	–	12	1	–
Average level (0.75–0.80)	4	1	–	–
With a reduced level (0.80–0.85)	5	1	3	–
Relatively-prosperous (0.85–0.90)	3	–	2	8
Prosperous (0.90–0.95)	4	–	4	7
Most prosperous	–	–	4	1

Explanation: I – HDI; II – index of life expectancy; III – index of income; IV – index of education

Source: Formed by the authors

Kazakhstan requires a national strategy for the development of human capacity for managing regional differences of conditions and factors of socio-economic development. Mechanisms that are suitable for some regions may be insufficient and even inefficient for others. We can identify priority areas for socio-demographic policy: targeting social protection, employment growth, increasing real incomes, reducing mortality and increasing life expectancy, increasing the birth rate and natural population growth. All these will help to improve the level and quality of life in the 'depressed' regions.

CONCLUSIONS

Summarizing the results of the study, it is possible to identify the following. The spatial analysis and estimation of human development in the context of the national population policy have shown regional differences in the indicators that determine human development in the country and the lag of the demographic processes' rates in comparison with the rates of socio-economic processes.

Territorial differences in geo-demographic processes are fixed across the whole country. The regions with the positive dynamics of the natural reproduction of the population are primarily the regions of Southern Kazakhstan. While in other parts, especially in East Kazakhstan there is a demographically complicated situation.

Indicators of reproductive population of the republic, such as fertility, mortality and natural increase in 1991 were exceeded only in 2009 with the beginning

of transformation processes of the former Soviet Union and the return of some ethnic groups to their historical homeland in Kazakhstan; a negative migration balance, not only completely absorbed the natural increase of population, but also exceeded it by more than two times. It is especially worth noting that in the external migration the republic lost the most qualified personnel, which could not but affect the quality of human potential. Under modern conditions of economic modernization in Kazakhstan, the ultimate objectives of socio-demographic development should be the increase in the level and quality of life and socio-economic development of all areas of the country. It is necessary to study the processes, using the integration capabilities and sociological traditional economic geography, which is of great importance for further development of the theory and practice.

An analysis of socio-demographic processes as the foundation of human development must be conducted at a more detailed local (municipal) level. It is impossible to pursue social and demographic policies without taking into account regional aspects. Therefore, the database must be created with the use of GIS for the whole territory of Kazakhstan to monitor and manage human development

While working at and implementing state purpose-oriented programmes for improvement the level of human development, it is necessary to make a complex analysis of regional differentiation of social and demographic processes in the republic.

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CHANGES IN POPULATION AND ECONOMY IN ŚLĄSKIE VOIVODSHIP IN THE CONTEXT OF THE SUBURBANIZATION PROCESS

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ABSTRACT. This paper attempts to determine and describe suburbanization stages (especially in the context of political-economic transformations and population changes) and also, to verify classical models of urbanization stages as a system of concentric zones, basing on historical process of development of complex settlement systems of Katowice voivodship (according to the former administrative division), i.e., Katowice conurbation, Rybnik agglomeration, Bielsko-Biała agglomeration, and Częstochowa agglomeration. The analysis includes the population number and the balance of migration between 1975 and 2008, as well as the number of entities of national economy between 1995 and 2008. Every settlement system was divided into its core, such as the main city or a group of cities, and its surrounding area, comprising urban and rural municipalities directly neighbouring the core. The calculations included absolute single-base increments and chain increments.

The analysis showed that the historical processes of urbanization of the Śląskie voivodship reveal significant variations in the way they were shaped in comparison with model-based approaches included in the literature of the subject matter. The agglomeration of Częstochowa is the closest to the concentric model, consisting of urbanization, suburbanization and deurbanization, whereas the remaining settlement systems reveal bigger or smaller differences. Variations between analyzed settlement systems reveal themselves also in contemporary times. The rate of population growth and migration balances divide the systems into different stages of maturity of suburbanization. The earliest were discovered in the Katowice conurbation. As much as the rate of population changes and migration balances significantly differentiated the core areas in comparison with their surroundings, the differences were less obvious in the aspect of business growth rate. This results from the fact that the core areas still retain the majority of workplaces. An increase of business activity around the surrounding areas remains selective, both as to the kind and space, revealing somehow higher rate as far as the agglomeration of Bielsko-Biała is concerned.

KEY WORDS: Poland, Śląskie voivodship, Katowice conurbation, Rybnik agglomeration, Bielsko-Biała agglomeration, Częstochowa agglomeration, suburbanization.

INTRODUCTION

Despite the fact that the notion of suburbanization may carry a variety of different meanings which emphasize different aspects of the process, its core meaning is most frequently associated with the transfer of urban spatial forms and city lifestyle outside the city centres and onto the surrounding areas. At the same time, such an understanding of the process of suburbanization conforms to a broader approach in comparison with mere decentralization of urban areas, i.e., a transfer of population and entities of national economy from the central city into the suburban zone (Lisowski, Grochowski, 2007; Szymańska, Biegańska, 2011). A. Lisowski and M. Grochowski (2007) also mention three following spatial contexts of suburbanization: (a) the first context – within administrative borders of a city, but on the areas which have not been developed so far, particularly in the peripheral areas and the areas adjacent to other settlements; (b) the second context – outside the city limits in the so-called suburban areas; (c) the third context – outside the suburban areas.

Historically, the phenomenon of suburbanization appeared at the beginning of the 20th century and was caused by the development of urban transport, shortage of unoccupied residential areas inside cities and also an increasing role of social stratification of the dwellers. Increasing wealth of some social strata facilitates their emigration from the deteriorated central districts into the suburbs which, due to their vicinity, make daily trips to and from work possible and yet offer better living conditions to the inhabitants of such peripheral areas (Beim, 2009). Thus the phenomenon of suburbanization entails both changes in the density of population and changes in the functional structure. The function of housing that has dominated the city central areas over centuries, seems to have been gradually replaced by the service function (Maik, 1997; Liszewski, Maik, 2000; Szymańska, 2009). ‘This stage of suburbanization is characterized by a rapid development of industry, particularly in its newly founded branches (...). The population of agglomerations increases, but its most rapid rate takes place in their external zones. New service providing spots are founded and the income level of the population grows, which causes higher demands as to the level of life (...). A car and public transport play an important part as a commonly used means of transport...’ (Szymańska, 2007: 47). Although suburbanization is a beneficial process from the point of view of an individual, it may be considered unfavourable from a general standpoint. As J. Parysek (2008) claims, it leads

to irrational use of land, decrease of agriculturally exploited areas, increase of the cost of building and maintenance of infrastructural networks, and increase of traffic.

The classical model of L.H. Klaassen and J.H.S. Paelinck (1979) assumes that suburbanization reveals itself in the form of a concentric zone surrounding a city or an agglomeration. However, there is a question of how the phenomenon of suburbanization changes spatially and structurally together with the increase of complexity of a settlement system?

The research into the suburbanization process conducted until now, emphasizes a possibility of simultaneous occurrence of different stages of this process and an incomplete sequence of particular stages of transformation (Zborowski, 2005; Runge, 2005). The analysis of the historical process of forming complex settlement units of the Śląskie voivodship alone, including the conurbation of Katowice and the agglomerations of Bielsko-Biała, Częstochowa and Rybnik, reveals varied rates and directions of the development of the land and population changes. This is why the area of the Śląskie voivodship is a perfect research area, where consecutive complex settlement systems were founded under different political and economic conditions, which in turn led to the development of varied spatial and functional structures (Rajman, 1977; Gwosdz, 2004; Tkocz, 2008). Currently, the lowering rate of demographic changes additionally differentiates the voivodship into its northern and regressive part, its central part considered relatively stagnant, and its southern, moderately progressive part. The spatial changes of inflow population rate alone allows for distinguishing three major models (Runge, 2005): (a) a vector model, comprising the urban gminas (administrative region of the 3rd order) of Będzin, Bieruń, Łędziny, Częstochowa, Lubliniec, Mikołów, Zawiercie, and Żywiec; (b) a model of two directions, comprising the urban gminas of Cieszyn, Gliwice, Kłobuck, Myszków, and Tarnowskie Góry; (c) a concentric model, comprising the urban gminas of Bielsko-Biała and Pszczyna.

Suburbanization in Northern Rhein and Westphalia reveals a similarly complex character (Heilemann, Kemming, 2002). The researchers emphasize the differentiation of population changes, land use and development of integrated transport which facilitate the origin of a sub-central zone. Such a zone can be identified in terms of internal suburbanization.

The above facts reveal significant differences in the process of urbanization taking place in the area under question. The aim of this paper is an attempt to formulate characteristics of population changes, housing pattern and localization of entities of national economy in the settlement system of Śląskie voivodship in the context of the suburbanization process. The starting point is the historical model of urbanization changes of the area.

HISTORICAL MODEL OF CHANGES IN URBANIZATION OF THE AREA OF THE ŚLĄSKIE VOIVODSHIP

An analysis into the origin and the historic process of the formation of spatial and functional structures of the Śląskie voivodship reveals significant differences in the urbanization process in comparison with model definitions (Fig. 1). Some basic qualities of consecutive stages of the formation of spatial structures have been defined for each of the complex settlement systems, together with major directions the population has migrated in.

Thus, contrary to the classical models provided by L.H. Klaassen and J.H.S. Paelinck (1979), a change in population density profiles was directed from the outside areas towards the centre. Even before the times of industrial growth, in the Middle Ages, urban centres such as Tarnowskie Góry, Toszek, or Gliwice developed on the outskirts of the future conurbation. The area of Katowice consisted then of impassable, densely forested and swampy areas. The discovery of iron ores, as well as the activity of the Wincler family in the 19th century, resulted in the acquisition of city rights by the capital of the region as late as in 1865. Until then, all the industrial development and population inflow concentrated around such cities as Bytom, Gliwice, and Tarnowskie Góry, i.e., around the northwestern and western part of the external zone of what is now the conurbation of Katowice. Only the second stage of changes, which took place between the years 1865 and 1939, conforms to the model of urbanization stages. Not only did Katowice reached the level of other cities then, but it also exceeded them as far as the concentration of development promoting factors was concerned. Due to relatively good supply of housing, businesses or infrastructure in centrally located settlements of the conurbation such as Katowice, Chorzów, Bytom, Siemianowice Śląskie, or Świętochłowice, the decision to commence the process of deglomeration, included in the first regional plan for the voivodship conceived after WW2, assumed mainly an expansion of the housing function in the settlements located in the external zone of the conurbation. At the same time, it facilitated a direct transfer from the stage of agglomeration to the stage of external suburbanization. While the notion of suburbanization is related to decreasing significance of central areas on behalf of the surrounding areas, a further differentiation must be made into its internal and external form. The first refers to a gradual transfer of the peak population density and development into settlements directly neighbouring the centre of the system; the latter denotes a rapid development of settlements located further away from the centre but belonging to the same settlement system. The external suburbanization took place after the year 1945 in the conurbation of Katowice. It revealed itself in various periods of time and at different rates, but it is generally

considered to have expanded in the 1950s and 1960s in Tychy, and in the 1970s in Dąbrowa Górnicza. At the same time the gap of decreasing population density is becoming more and more visible. Chorzów, located centrally in the conurbation, is characterized by a demographic regression; the number of its inhabitants after the year 2000 matched the one at the beginning of the 1950s. After the political and economic transformation the population gap considerably expanded. Not only Chorzów but also its neighbouring cities revealed a permanent demographic regression. Simultaneously the conurbation of Katowice became unattractive as a destination for potential migrations.

Another settlement system under examination is the agglomeration of Rybnik. The environmental factors such as good farming conditions, presence of watercourses and water reservoirs as well as topoclimatic conditions and its location at the major transport route between Poland and Czech Republic promoted settlement. As early as in the Middle Ages the settlement of Żory was founded with Rybnik and Wodzisław Śląski to follow. The discovery of coal strengthened the urbanization processes; hence the 19th century was first and foremost connected with the development of the central part of the newly formed agglomeration. The migratory movements were directed towards the centre. The years between 1850 and 1939 on the one hand continued the urbanization processes, but on the other created grounds for strengthening the multi-spatial character of the changes as a result of expansion of mining fields. The 1950s introduced a new quality into the image of urbanization as it was. The decision to transform Jastrzębie Zdrój from a little resort into a large industrial centre changed considerably the spatial structure of the entire area. One could possibly call it a stabilized morphological form of a settlement system. At the same time the years 1960s and 1970s became a transition period between the stages of urbanization and indirect suburbanization. Not only the settlements directly neighbouring major cities develop, but also the settlements located further away from them. Similarly to the conurbation of Katowice, 1989 begins the period of population drop, resulting on the one hand from little increment or natural decrement, but on the other from a shortage of factors to attract immigrants.

The third settlement under scrutiny is the agglomeration of Bielsko-Biała, divided until 1950 by a state border first, and then by an administrative border. The western part of the city, i.e., Bielsko, was granted its city rights as early as in the second half of the 13th century, while the eastern part in 1723. Both were separated by the Biała River which, paradoxically enough, allowed for economic development of both parts; Bielsko became a centre of textile industry and Biała promoted weaving industry. In 1772 the state border between Austria and Poland became an internal Austrian border, making Biała part of the Austrian Galicia region. In 1784 the customs border was abolished; for a short time the

history of the area was further complicated by incorporation of Biała, together with the Principality of Oświęcim into German Federation between the years 1820 and 1850. This reflected the pattern of the conurbation of Katowice which between the years 1795 and 1807 was part of the so-called New Silesia, which in turn was a result of the military power of Prussia and the expansion of its territorial demands further east in comparison with the territories Prussia had acquired in the first half of the 18th century during Silesian Wars. With the third partition of Poland, Prussia entered the areas located east of the Przemsza and Brynica Rivers, creating the so-called New Silesia. In 1850 Biała, together with the province of Małopolska were regained by Austria and the border between Bielsko and Biała became an administrative, internally Austrian border again. As late as in 1950 both settlements were reunited into one city and the process of proper adjustment of its spatial and functional structures began. In 1975 the city became the capital of the voivodship, which facilitated development of its population and economy, particularly the automotive industry. The process of indirect suburbanization commenced, especially in the western part of the back-up area of the city. After 1989 this tendency was strengthened further, which resulted in the rapid development of Jaworze.

The urbanization model that is closest to its classical representation is the one of Częstochowa. It was granted its city rights in 1356 and in 1502 the act was renewed, this time on the basis of the Magdeburg Law. Its peripheral location in relation to the administrative centre of the state contributed to frequent changes in its national status; in 1793 the second partition of Poland left it in the hands of Prussia only to return to Poland in 1807 and to incorporate it in the Russian Partition in the 1830s until WW1. As late as in the interwar period the city went back under Poland's rule. Although the agglomeration of Częstochowa was characterized by the lowest immigrant attractiveness rate compared with other settlement systems of the province, it was an important pole of social and economic activity, especially for the inhabitants of the northern part of the region. Moreover, a considerable difference between the sizes of the central city and other cities and towns of the province, caused to a great extent by the transboundary location of the area and the impact of the partitions, produced certain 'overrepresentation' of the impact the migrations had on its development. The vicinity of recreationally attractive areas of the Kraków and Częstochowa Upland, especially in the southeast of the supporting area of the agglomeration of Częstochowa, led to the establishment of a number of seasonal or all-year tourist resorts. For example, such settlements as Żarki, Kroczyce, or Myszków have reached the status of development poles in this respect. Similarly to the cases already mentioned in this paper, the tendencies in population migrations directed outside the centre became significantly stronger after 1989.

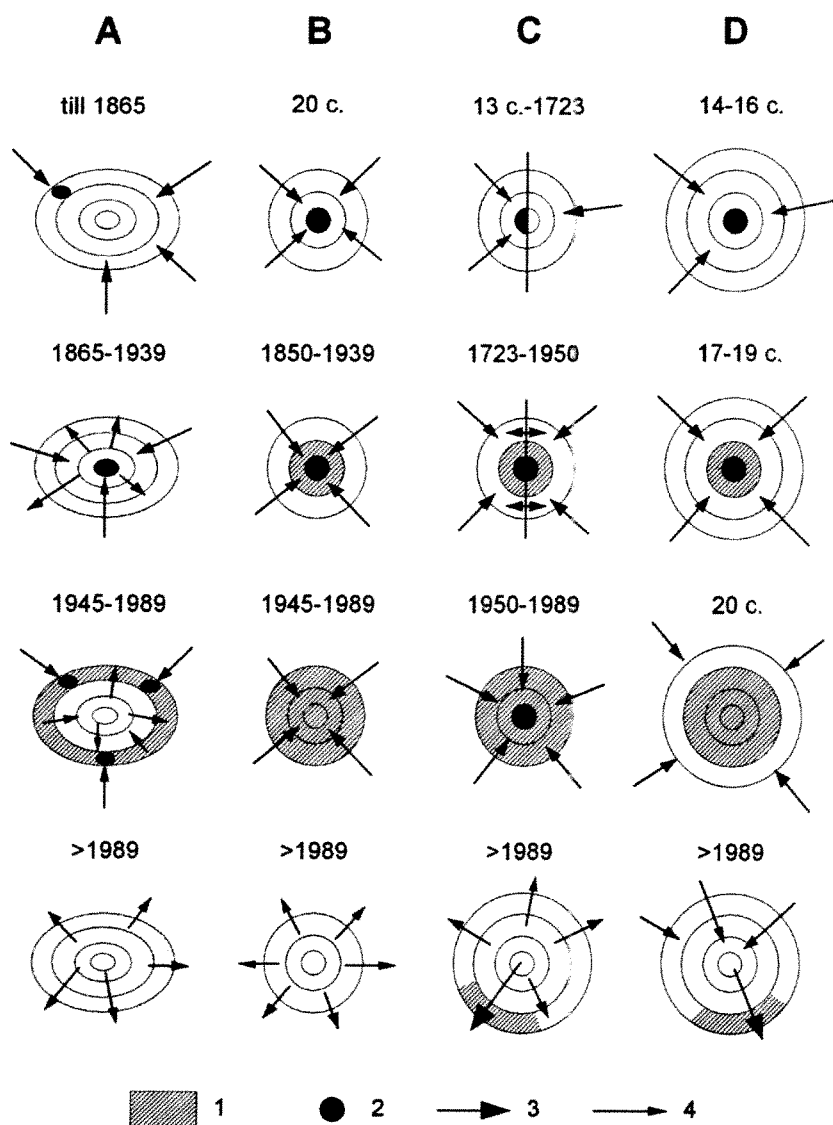


Fig. 1. Historical models of urbanization of complex settlement systems in Śląskie voivodship

Explanation: A – Katowice conurbation; B – Rybnik agglomeration; C – Bielsko-Biała agglomeration; D – Częstochowa agglomeration; 1 – zone of intensive urbanization; 2 – towns of intensive urbanization; 3 – dominated directions of population migration; 4 – directions of population migration

Source: By authors

ELEMENTS OF THE SUBURBANIZATION PROCESS IN THE AREA OF THE ŚLĄSKIE VOIVODSHIP BETWEEN THE YEAR 1975 AND 2008

The differences in the urbanization pattern of complex settlement systems which have been mentioned before must have been reflected in the postwar rate of their numerous social and demographic characteristics. At the same time, one can assume the existence of territorial differences between them in the form of the system core and its surroundings. Up until now, attempts at showing these differences as the core versus the surrounding and peripheral areas of a conurbation/agglomeration have been taken randomly. The few researches include a paper by R. Adamczyk (2008) which tackled the issue of development of rural areas in the external zone of the conurbation of Katowice.

In order to finally settle the issues discussed above, the analysis conducted in this paper included the number of the population and the migration balance for the years 1975–2008 with an additional analysis of housing economy and entities of national economy over the years 1995–2008. For each settlement complex its core was determined, comprising a main city or a group of cities, together with urban and rural gminas directly neighbouring the core. Using the data compiled for the years 1977–2008 calculations of the single-base and chain increment were made (Sobczyk, 1995). The first allow for an investigation of the rate of a phenomenon in relation to its starting year treated as a basis for reference which equals 100, while the other reflect the scale of changes always in relation to the preceding year (Fig. 1).

And thus, in the case of the agglomeration of Częstochowa, until 1994 a population growth had been noted in the core of the settlement system (Fig. 2a). In the years that followed, this rate significantly dropped and the population of Częstochowa decreased remarkably. This is why increments in population in the direct vicinity of the centre became noticeable after 1994; the scale of these increments slightly surpasses 5 thousand people. Such a shape of the graphs shows that the decreasing population of Częstochowa does not match suburbanization processes in its direct vicinity (Fig. 2b). From 1990 onwards, the negative migration balance has been maintained, while the gminas neighbouring the core cannot stop migrations to remote regions. The agglomeration of Częstochowa is an example of external suburbanization.

The rate of population and the migration balance looked different in the agglomeration of Bielsko-Biała (Fig. 3a). Its peak population was reached in 1991, however, in the years that followed its rate was almost stagnant, revolving around the same level, while the significance of the surroundings was growing considerably. The breakthrough year was 2005 when the rate of changes in population in the surroundings of Bielsko-Biała exceeded that of the main city.

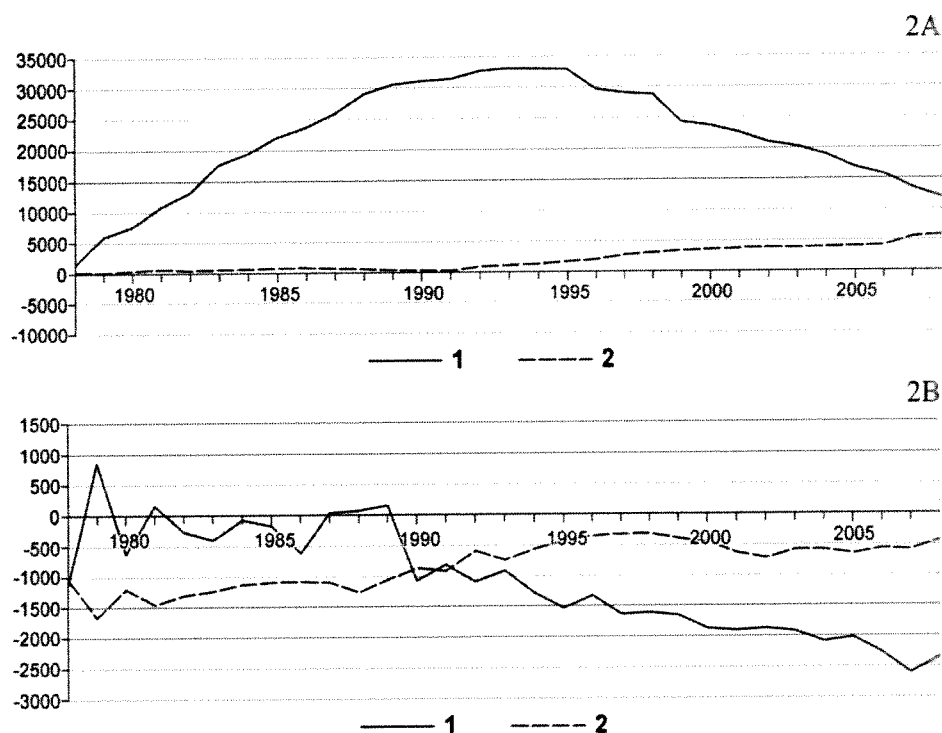


Fig. 2. Dynamics of population and migration balance in Częstochowa agglomeration and its surrounding

Explanation: A – absolute one-basic increases – population; B – absolute one-basic increases – migration balance; 1 – core of agglomeration; 2 – surrounding of agglomeration

Source: By authors

This is how the internal suburbanization was initiated as a result of developmental impulses in the gminas directly neighbouring Bielsko-Biała. A significant part in the process was played by migration with the core suffering from constant chain decrements (Fig. 3b). An opposite tendency was only noted in the years 1981–1982. In the vicinity of the central city, however, the significance of this phenomenon increased; this particularly refers to Jaworze, which enjoys a reputation of a place that is especially attractive for residence in the opinion of many more than just the inhabitants of the southern part of the voivodship.

The conurbation of Katowice is another settlement system being analyzed in this paper. The rate of changes in its population resembles that of the agglomeration of Częstochowa, yet its peak point came earlier and lasted longer, between the years 1987 and 1990 (Fig. 4a). And while the diagram of single-base increments

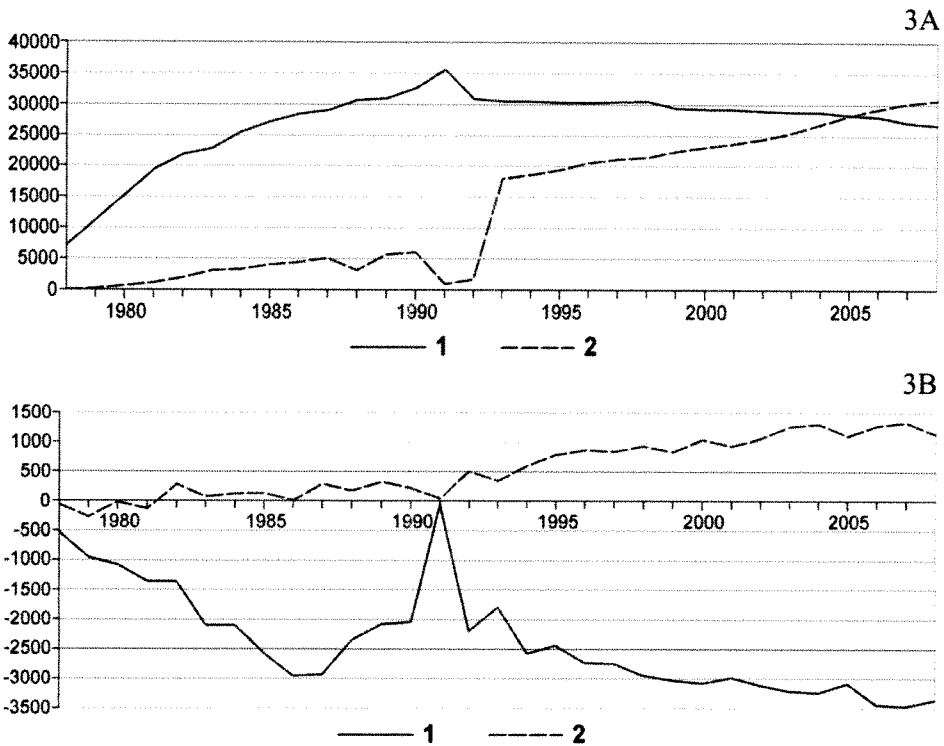


Fig. 3. Dynamics of population and migration balance in Bielsko-Biała agglomeration and its surrounding

Explanation: A – absolute one-basic increases – population; B – absolute one-basic increases – migration balance; 1 – core of agglomeration; 2 – surrounding of agglomeration

Source: By authors

for Częstochowa is almost symmetrical, it is assymmetrically bent leftwards for the conurbation of Katowice. Until 1990 the cities of the Katowice conurbation had revealed increments, later followed by decrements, while the agglomeration of Częstochowa continuously revealed increments. On the top of that, since 1990, the conurbation of Katowice has been characterized by a higher rate of changes of population in its surroundings and somehow lower in its core.

The image of the rate of migration balance for the above settlement systems also reveal some degree of similarity (Fig. 3b, 4b). After 1977 the conurbation of Katowice suffered from decreasing chain increments, i.e., a weakening rate of migration balance. However, one can observe many fluctuations in this tendency over time. The rate of migration balance for the surroundings of the conurbation of

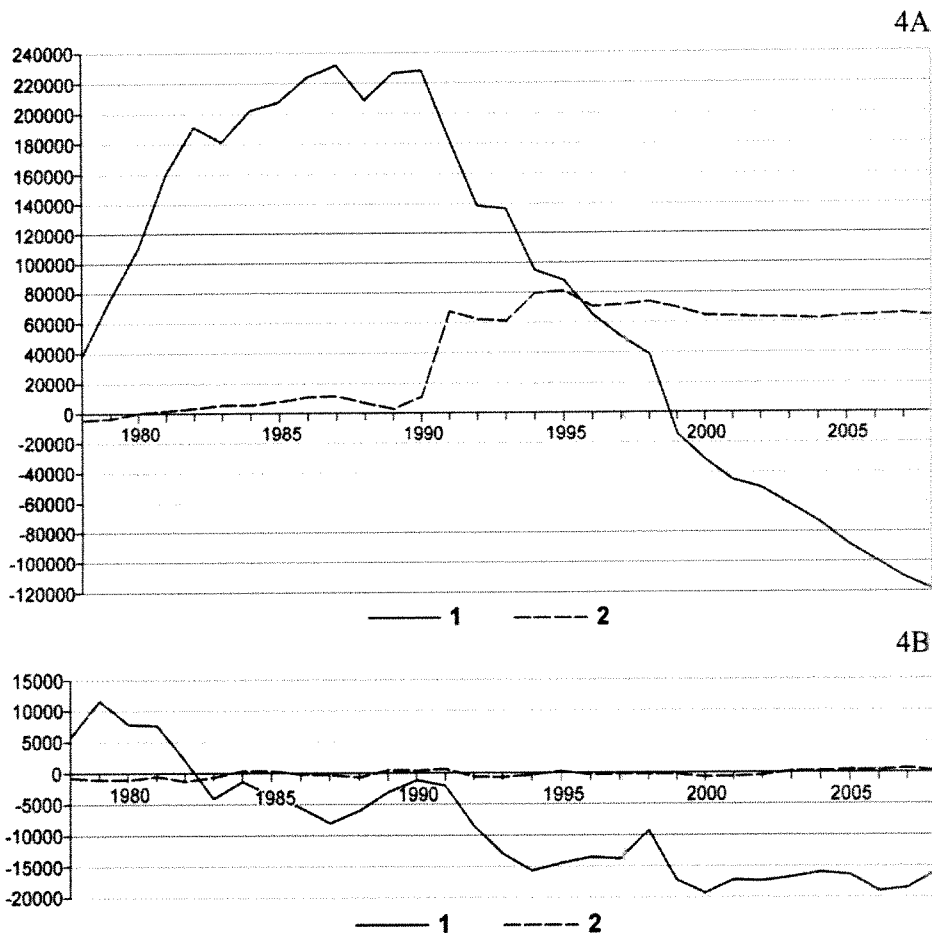


Fig. 4. Dynamics of population and migration balance in Katowice conurbation and its surrounding

Explanation: A – absolute one-basic increases – population; B – absolute one-basic increases – migration balance; 1 – core of conurbation; 2 – surrounding of conurbation

Source: By authors

Katowice is close to zero, which proves external suburbanization. The decrement of population and migratory outflow do not cause an inflow of population to the closest settlement, but the ones located further away, especially in the southern part of the voivodship.

The fourth settlement system under scrutiny is the agglomeration of Rybnik. The single-base increments of its population slightly vary over time. A weak culmination rate is noticeable at the beginning of the 1980s, yet in the following

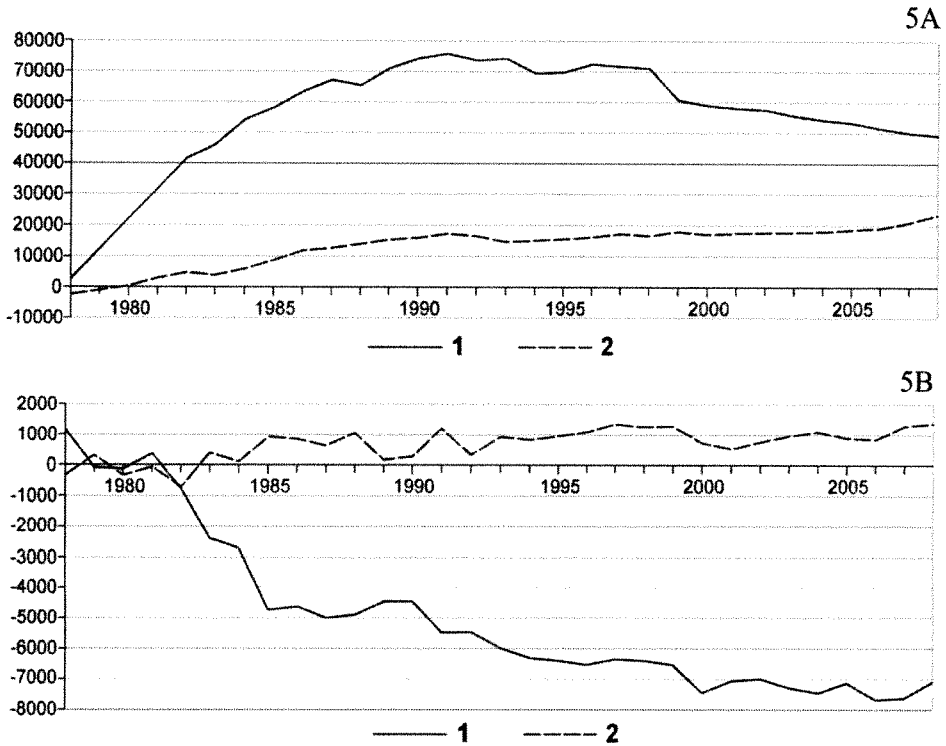


Fig. 5. Dynamics of population and migration balance in Rybnik agglomeration and its surrounding

Explanation: A – absolute one-basic increases – population; B – absolute one-basic increases – migration balance; 1 – core of agglomeration; 2 – surrounding of agglomeration

Source: By authors

years the graph in Fig. 5a reveals a weak decreasing tendency. In the case of the surroundings it reveals a slight increase, which could suggest a steady urbanization tendency (Fig. 5b). Despite the fact that the rate of migration balance considerably decreased, the drop was too small to initiate the process of suburbanization. This statement is further supported by the small scale of chain increment of migration balance, calculated for the surroundings of the agglomeration of Rybnik. It remained positive and as early as in 1982 exceeded the level that matched the graph for the core, yet the size of the difference does not matter much. There is another reason for this, that is, the spatial structure of the area. The agglomeration of Rybnik, especially its western and southwestern parts, is dominated by residential areas consisting of individual, one-storey

housing. It constitutes a wide, well developed suburban zone of Pszów, Rybnik, Rydułtowy, and Wodzisław Śląski.

As it was mentioned before, the transfer of population from cities to suburban areas is accompanied by the population's increasing business activity (Lisowski, Grochowski, 2007). The settlement units of the Śląskie voivodship under research are no exception. However, in this case the statement of an escape of entities of national economy is not valid, as between the years 1995–2008 both the core parts of the agglomerations and their surroundings revealed an increase in the number of entities of national economy (Table 1).

Table 1. Entities of national economy in the agglomerations and conurbation of the Śląskie voivodship and their surroundings in 1995 and 2008

Specification	A		B	C		B
	1995	2008		1995	2008	
Bielsko-Biała agglomeration	16,985	23,476	138.2	94.8	133.8	141.2
Surrounding of Bielsko-Biała agglomeration	4,944	9,763	197.5	52.7	92.3	175.1
Częstochowa agglomeration	21,641	25,507	117.9	83.5	106.7	127.8
Surrounding of Częstochowa agglomeration	4,340	5,675	130.8	60.9	75.7	124.3
Katowice conurbation	155,875	214,276	137.5	64.9	97.6	150.4
Surrounding of Katowice conurbation	15,367	26,668	173.5	41.7	75.8	181.8
Rybnik agglomeration	20,818	30,839	148.1	49.4	76.8	155.5
Surrounding of Rybnik agglomeration	6,606	11,571	175.2	40.1	67.4	168.1

Explanation: A – entities of national economy; B – rate of changes 1995=100; C – entities of national economy per 1,000 inhabitants

Source: Own calculation on the basis of the Regional Database of the Central Statistical Office (Główny Urząd Statystyczny)

The difference was discovered only in the rate of the growth which was much higher in all the surrounding areas of the conurbation and the agglomerations than in their core parts. The highest growth rate of entities of national economy and at the same time the biggest difference in comparison with the core part was noted in the agglomeration of Bielsko-Biała. The opposite end is occupied by the agglomeration of Częstochowa, where both the core part and its surroundings reveal a weak increasing tendency. It is worth noting that the highest growth rate of entities of national economy of all the agglomerations and conurbation under research was discovered in the agglomeration of Rybnik, which resulted from expanding the area's economy by new functions, unrelated to the dominant coal mining industry.

Analyzing the changes of population in its economic aspect, it shows that as a result of a drop in population in the core areas in the years 1995–2008, the growth rate of business saturation in these areas is higher than it seems while analyzing the absolute number of entities of national economy. On the other hand, the growth of population in the surrounding areas, except for the conurbation of Katowice, weakens the rate of business saturation in these areas. At the same time, it is worth mentioning that business saturation of the core parts and their surroundings still considerably vary with the surrounding areas in the lead. The differences are relatively insignificant only in the agglomeration of Rybnik and its surroundings. Despite an increase in business activity in the surroundings of the conurbation and agglomerations, observations of daily oscillatory traffic show that for the majority of the inhabitants of the suburbs of the Śląskie voivodship it is the core parts of the agglomerations and conurbation that have remained their main labour market.

An image similar to the above is reflected in housing policy. A general tendency to improve both quantitative and qualitative indexes characterizing housing policies of gminas of Śląskie voivodship (Kłosowski, 2010) reveals first and foremost a differentiation of the rate of changes in the analyzed systems (Table 2). An increase in population within the areas surrounding the agglomerations and

Table 2. Housing economy in the agglomerations and conurbation of the Śląskie voivodship and their surroundings in 1995 and 2008

Specification	A		B	C		B	D		B
	1995	2008		1995	2008		1995	2008	
Bielsko-Biała agglomeration	56.7	66.3	116.9	194.0	237.7	122.6	3,303.0	4,378.1	132.5
Surrounding of Bielsko-Biała agglomeration	36.9	47.6	129.1	138.5	198.0	143.0	2,627.2	4,059.8	154.5
Częstochowa agglomeration	89.0	96.0	107.9	276.0	315.9	114.5	4,688.8	5,784.8	123.4
Surrounding of Częstochowa agglomeration	27.6	31.1	112.7	96.5	126.9	131.5	1,884.0	2,688.5	142.7
Katowice conurbation	844.3	868.1	102.8	2,696.5	2,868.1	106.4	45,215.0	49,961.8	110.5
Surrounding of Katowice conurbation	132.3	146.5	110.7	485.0	557.8	115.0	8,685.8	11,128.7	128.1
Rybnik agglomeration	118.7	132.2	111.4	435.7	505.3	116.0	7,754.0	9,365.1	120.8
Surrounding of Rybnik agglomeration	53.5	62.5	116.9	231.0	288.6	125.0	4,342.6	5,709.2	131.5

Explanation: A – number of dwellings (in thousands); B – rate of changes 1995=100; C – number of rooms (in thousands); D – usable floor space of dwellings (in thousands in m²)

Source: Own calculation on the basis of the Regional Database of the Central Statistical Office (Główny Urząd Statystyczny)

conurbation in Śląskie voivodship causes a higher rate of increment of housing facilities, rooms, or generally usable area. The highest rate is present within the agglomeration of Bielsko-Biała and the lowest in the surrounding areas of Katowice conurbation. Interestingly enough, relatively insignificant differences in the rate between the core part and the surroundings occur in the agglomeration of Rybnik.

However, taking into account changes in population per 1,000 inhabitants, it seems that between 1995 and 2008 the rate in the core parts of complex settlement systems and their surroundings is similar. Still, the fact remains that considerably better housing conditions occur in the surrounding areas of agglomerations and conurbation of Śląskie voivodship when compared with their core parts; usually it converts to 30% larger usable area of flats per capita. However, such a situation is standard bearing in mind the reasons for this type of population migrations, the most important of which is an improvement of both natural and housing environment, which is most easily achieved through the model of an own detached house with a garden.

CONCLUSIONS

The research into suburbanization of complex settlement systems of the Śląskie voivodship, based on the historic changes in settlements and their population, allow for the formulation of the following general statements.

First and foremost, taking historical processes of urbanization of the Śląskie voivodship as the starting point for research, one can notice significant variations in their shape when compared with the model approaches presented in many reference books mentioned in this paper. The agglomeration of Częstochowa is the closest to the concentric model, with the processes of urbanization, suburbanization and deurbanization; the remaining settlement systems reveal smaller or bigger differences. Very much so, the development of the conurbation of Katowice is unique due to its direction from the peripheral areas towards the centre. Historically, such surrounding cities and towns as Będzin, Bytom, Gliwice, Mikołów, and Tarnowskie Góry were the first to appear, while Katowice and its neighbouring cities and towns developed as late as in the second half of the 19th century, with their city rights obtained in the 19th or even 20th century. The largest city in the conurbation now, namely, the city of Katowice, took over the part of the administrative centre as late as in the interwar period. What is more, the settlement systems of the conurbation of Katowice, together with the agglomeration of Bielsko-Biała, were formed under the conditions of a political and administrative division of the territory due to the consecutive partitions of

Poland. The urbanization processes of the agglomeration of Rybnik became significant only after WW2, due to development of coal mining industry there.

Secondly, the differences between the settlement systems that have been mentioned in this paper also hold in contemporary times. The population rate and migration balance alone divide the settlements into different types of progress suburbanization has reached there. This was first revealed in the conurbation of Katowice and then in the agglomeration of Bielsko-Biała. The agglomeration of Rybnik, due to the private housing dominating its spatial structure, especially in the western part of city and its back-up area, has not even begun the process of suburbanization, while the agglomeration of Częstochowa reveals lower rate of population growth in its surrounding zone than in its central part. However, since 1990 it has been the surrounding zone that has played a more important role in the migratory processes.

Thirdly, the tendencies in population are accompanied by matching processes of changes in housing policies which, as a result, cause higher rate of increment of houses, rooms and usable area of flats in the surrounding areas, as well as better qualitative parameters of housing, when compared with their core parts. It is clearly noticeable in the case of all the analyzed settlement systems, although the case of the agglomeration of Bielsko-Biała is perhaps the most spectacular in this respect.

Fourthly, the aspect of population is accompanied in these areas by specific economic tendencies. While in the first case the rate of population change and migration balance significantly differentiated the core areas in relation to their surroundings, in the latter the differences are not so clearly visible. This results from the fact that the core areas have still retained the largest proportion of the labour market. An increase of business activity in the surroundings of the core areas remains selective as to the kind and space. Relatively highest growth rate in the number of entities of national economy in the surrounding areas was detected in the agglomeration of Bielsko-Biała, while a similar weak tendency for growth was discovered in the agglomeration of Częstochowa. This provokes a conclusion that the correlation between the processes of suburbanization in the core and its surroundings will not always be evident, as these phenomena may occur at a certain delay. What is more, the direction and the rate of the demographic suburbanization do not have to match each other.

In order to obtain a better picture of the process of suburbanization in the Śląskie voivodship, a further expansion of the scope of the research is necessary. This entails research into its spatial aspect and including in the research the gminas that are located further away from the central unit. This is of particular interest as far as the conurbation of Katowice is concerned in the way the conurbation of Katowice and Kraków challenge each other.

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THOMAS MALTHUS MODERN SOUNDING

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ABSTRACT. Thomas Malthus was perceived in history as a man of one idea, of one law, namely, as the author of 'the law of population'. His ideas have been inspiring hot arguments and discussions for over 200 years. In our article we want to present Thomas Malthus as a profoundly decent man, social thinker, humanist and zealous servant of the ideals of Enlightenment.

KEY WORDS: Thomas Malthus, Malthusianism, population growth, productivity, standard of living, poverty, charity.

INTRODUCTION

The purpose of this article is to dispel the many misconceptions surrounding the figure of Thomas Malthus and his book. These misconceptions are not random; they are due to ideological unacceptability of Malthus teaching for both left and right. The first resented his desire to reduce the pressure on the labour market in order to raise labour costs, instead of radically reorganizing the society; the second resented his extremely hostile attitude to all measures that infringe the economic interests of the working class. Even the encyclopedic dictionary 'Demography' published in 1994 by the publishing house 'Great Russian Encyclopedia', has an enormous article 'Malthusianism' which contains a statement that is far from being true, that 'he [Malthus] considered the spreading of Christian asceticism among people, and the 'moral rein' (or voluntary refusal to get married and give birth to children) as means against overpopulation'. We should thank God that Malthus, being a true ardent Christian, priest and theologian, had no chance of reading it himself. This venerable publication gives a very short (and very dry) article devoted to Malthus as a person and thinker, where it is not even mentioned that he was a Foreign Honorary Member of the Saint Petersburg Academy of

Sciences (1826). Indication of this fact, absolutely obligatory for all encyclopedia publications, is strangely omitted in the article 'Malthus' in the Great Soviet Encyclopedia, which had been prepared with much more assiduity than the Great Russian Encyclopedia. The article 'Malthusianism' in the GSE ends as follows: 'The provisions of Malthusianism and neo-Malthusianism are a clear confirmation of the reactionary bourgeois ideology, that is why the classics of Marxism – Leninism stressed more than once the necessity of the decisive uncompromising and merciless struggle against Malthusianism, neo-Malthusianism in its all diversions, ... against the attempts to impose this reactionary and cowardly theory on the most advanced, the strongest class, the class of modern society that is ready for great developments' (Lenin, 1973: 257).

MALTHUS AS A SOCIAL THINKER

Thomas Robert Malthus (17.02.1766 – 23.12.1834) was a true ardent Christian and he faithfully served the ideals of the Enlightenment. He showed brilliantly that the belief in Reason can combine with the belief in God very naturally. Nowadays some people do not believe in God, some in Reason, the rest in anything, and the amount of the latter increases. It will not be easy to attract attention to the ideas of the kind old rationalist, but maybe the fate of his hideously perverted ideas, the ideas of this slandered and denigrated man would be interesting to us, those who live in the era 'of natural extinction of the light of Reason'? Since Malthus's contemporaries were not fair towards him, just like his descendants, he had a chance to answer many of their attacks: 'They say that I have written my big work just to prove that the population increases in geometric progression, and the means of livelihood increase in arithmetical progression. It's not fair. The first statement seemed to me obvious as soon as the degree of reproduction in America was proven, and the second didn't even need the proof. The main aim of my composition is to study the effects that should arise and that actually arose among human societies due to the laws described on the first pages of my work' (Malthus, 1993: 116).

It would not be quite right to put the social thinker, who lived and worked two hundred years ago, to the trial of today and reproach him for the mistakes. Naturally, the population does not increase in geometric progression, except some not very long periods in the history of individual states. Naturally, physiocrats were mistaken when they thought that national income was created only in agriculture, and Malthus followed them and believed that it was harmful for the economy to help the poor giving them money. He thought it extremely honourable to cultivate a piece of land and then give the crop to those in need,

instead of giving them the money. The money, in his opinion, would only increase the aggregate demand for the same amount of food and thus cause the increase of prices. Malthus was thinking in the categories of his time and he is of interest to us as its progressive representative. We can not but respect his clever observation: 'It is difficult to understand, how there can be an opinion, after the work by Adam Smith, that the super power of the government can influence the change of economic conditions of the country, and that the supply and demand can become equal after taking certain decrees?' (Malthus, 1993: 36).

We can not but sympathize with Malthus in his struggle against the most dangerous prejudice, that is at the bottom of most, if not all, social upheavals: 'Disasters and distress of the lower classes and the habit to blame the government for them seem to me the true pillar of despotism. These disasters and this habit create the foundation for the abuse of the power' (Malthus, 1993: 61). According to Malthus, it is the necessity to keep the lower classes under control that justified the despotic ruling and represented the main threat to democracy.

Furthermore, Malthus is developing this topic: 'Thus, the responsibility, that Payne and his supporters lay on the government for the disasters of the people, is obviously a mistake. Though independent government institutions and a good government provide the decrease, to a certain degree, of the poverty, nevertheless their influence occurs to be only indirect and extremely slow. The consequences of such influence do not correspond to the expectations of the people who want direct and rapid relief that can be gained by revolutions. These exaggerated expectations and the excitement due to the fact, that they have not been fulfilled, give the false direction to the efforts of the people to gain freedom, and prevent the introduction of possible transformations, though slow and gradual, but at the same time, without a doubt, leading to the improvement of the fate of the people' (Malthus, 1993: 33).

Apparently, Malthus was an evolutionist and democrat. Hereinafter, we will try to show that Malthus partly was even a social-democrat, who had anticipated long before the emergence of this movement certain very important positions. However, we will first show that, in spite of the notoriety, or bad fame, Malthus was a true humanist, and the idea that the interests of a person should be subordinated to the interests of the government was absolutely unacceptable to him.

Malthus's approach to the problem of emigration, in this respect, is quite characteristic: 'It is necessary to accept as undeniable, that *eviction is certainly not adequate for the elimination of disasters, connected with overpopulation. But if we look at it as a temporary and individual measure, taken for the sake of expanding culture, then eviction turns out to be fit and useful.* Maybe it is impossible to prove that governments must actively promote eviction, but it is without doubt, that forbidding eviction is not only unfair, but also a very big

mistake. It is hard to think of anything more unreasonable than the fear that eviction can cause depopulation. Love to motherland and attachment to family hearth are so essential and strong, that people will never decide to leave, unless the political displeasure or hopeless poverty make them resort to this step, and in that case, their eviction is useful for the motherland. Also, the suggestion that eviction increases wages is unreasonable. If wages give an opportunity to the lower classes to live without extreme deprivation and suffering, people are sure not to think about eviction; but if the wages are so low that they cause deprivation and suffering, it would be cruel and unfair to stay in the way of evictions' (Malthus, 1993: 33).

The misleading stereotype that Malthus considered wars and epidemics as natural regulators of population should also be rejected by citing Malthus himself. Malthus considered such regulators deeply preternatural. He wrote: 'One of the most important reasons for the wars among ancient people was the deficit of space and food; though in conditions of existence of modern people certain changes have taken place, the same reason still exists, having changed the degree of tension. The ambitions of the rulers would have lacked the weapons for destruction if disasters had not urged the lower classes to stand under their banners. Recruiters dream of a bad harvest: it is profitable for them to have a big amount of spare hands without work – in other words, surplus in population is profitable for them. In early times wars were the main occupation of people, and wars caused the decrease in population much more than now, so the legislators and statesmen were constantly looking for the means to attack and defend, and thought it their obligation to encourage breeding of population; to achieve this cause they shamed celibacy and sterility, and on the contrary, honoured marriage. Folk beliefs formed under the influence of these rules. In many countries fertility was the object of worship. The religion of Mohammed, founded by sword and by significant destruction of faithful followers, established for them the commitment to bear a huge amount of children in order to praise their God, as the most important. Such rules served as the most powerful promotion of marriage, and the rapid increase of population was simultaneously the consequence and the cause of the constant wars that marked that period of humanity. Areas, ravaged by the preceding war, filled up by new dwellers that were used to form new armies. The speed with which recruitment was done, was the cause and the means for new destructions. Under the rule of such prejudice it is hard to envisage the end to the wars' (Malthus, 1993: 52).

In the same unambiguous way the 'misanthrope' Malthus expressed his opinion of epidemics: '...I stated, and continue to believe it now, that if the means of livelihood of the country do not allow rapid increase of population (and this is not correlated to the injections against smallpox), then either increase of deaths

due to some other reason, or decrease of relative number of births should take place. But at the same time I expressed my wish that the latter should take place: that is why, on the basis of the principles that I had always proclaimed, I should be considered the most ardent supporter of injections against smallpox. I am doing everything possible to improve the livelihood of the poor and to decrease the deaths/mortality among them, and it fully corresponds to my principles' (Malthus, 1993: 113). Malthus, offended by his contemporaries, refuted: '*One should absolutely misunderstand my teaching if they consider me to be the enemy of reproduction. My enemies are – vices and poverty* [italics by Malthus]' (Malthus, 1993: 111).

Let us distract a little from the actual demographic problems and look at Malthus as a social thinker. We will try to understand how he treated the poorest people – as the goal or as the means. For those who are acquainted with his book the answer is obvious – his position was genuinely humanistic and consistently refused to accept everything that caused a decrease in the cost of the labour force, was it either the introduction of potatoes and milk as the major food for the workers, or giving them cows as the means of commending their efficiency and improving their nutrition. Only the relatively high labour cost could give a worker an opportunity to use certain means to improve his poor conditions. '*As the consumption of milk, potatoes and cheap soup – the main food of common people – will cause the decrease of wages* [italics by the author], then maybe there will be a heartless politician who will advise to take this measure in order to be able to produce in England and supply the European markets with the goods at the lowest uncompetitive prices. I can't approve of such strivings. Actually, it's hard to imagine a more disgusting action, when for the sake of higher profits the authorities make their working classes suffer extreme poverty. The wealth and power of a nation are of any importance only if they promote happiness to all people comprising this nation. Saying all this, I don't mean to reduce the importance of wealth and power, v.v. I consider them the necessary means for achieving this goal. But, if in any individual case such goal and such means start to contradict each other, then intellect knows without doubt what choice to make' (Malthus, 1993: 92).

Malthus believed in intellect and the necessity to treat marriage very seriously; marriage can be possible only if there is possibility to support offspring without shifting this sacred responsibility onto the society. He saw the way out in late marriages, but not in the refusal to get married and have children. Hereto, he was decisively against the tradition, when a very young woman married a man much older, just for the purpose not to remain single. Older men, according to Malthus, should get married by all means, but to women closer to their age. Such a suggestion was, of course, in the interests of women, but not

of Malthus himself. But that was not the main reason why his contemporaries, and unfortunately, his descendants, disliked him.

True to Enlightenment ideals, Malthus believed in a responsible attitude to family as the duty of every man. Thus, it would be absolutely immoral to favour early marriages among the poor, giving them a chance to live at the cost of the society, i.e., parish. He thought it extremely dangerous to give the poor the right to be fed. It is absolutely necessary to help those in need in case of crop failure or other disasters, but they must not have the right to receive help, as it causes an irresponsible and dependent attitude. Has this problem become less current two centuries later? Has Malthus's approach become less unpopular?

Malthus was arguing actively with the contemporaries who supported this right: 'Whatever is said about this right, our behavior shows, that this imaginary right (the right of the poor to get fed) does not exist at all. If the poor could enjoy this right, no one would be able, without breaking the sense of fairness, to wear an expensive dress or eat meat. Those, who support this right, but at the same time drive a coach, live in luxury, feed their horses on the land, that could serve for feeding people, in my opinion, live in contradiction with their principles' (Malthus, 1993: 92). Rationalist Malthus was thinking about long-term consequences of such social policy much more than his contemporaries, or our contemporaries: 'Isn't it more useful to give away your piece of lamb to a poor worker, who has not had meat for the whole week? Isn't it better to give it to a family, who has nothing to eat? If such needs did not arise naturally after their satisfaction, it would be very good to satisfy them, and I would recognize their rights. But experience and speculation show, that recognition of such right would increase the needs to such a degree, that it would be *impossible* [italics by the author] to satisfy them, and, as the attempt to promote this way of action would plunge humanity into the most devastating hunger, it becomes obvious, that our silent refusal of such a right corresponds to the laws of our nature more, than the futile eloquence, that supports its existence' (Malthus, 1993: 116–117). Can we now say that Malthus was deeply wrong? Or else, that he is hopelessly obsolete?

Malthus wrote: '...we must take one inevitable, in my opinion, step, before we undertake any important alterations in the existing system, whether it is the matter of decreasing the aid or banning it absolutely. It will be fair and honorable. It is necessary to *openly renounce the imaginary right of the poor to be kept at the public expense* [italics by the author]. To fulfill this goal, I would recommend taking a law that envisages that parish authorities refuse to give allowance to children, who are born to marriages concluded one year after this law, and to all illegal children born two years after taking this law. In order to make this law known and understood by the people, I would recommend to oblige the

priests to explain to the newlyweds the obligations of each person towards their children, and to remind them, how immoral it is to get married without having a hope to fulfill these sacred obligations, of disasters of the poor, when they tried to substitute their own duties by the care of the public institutions, and, finally, of the need to refuse such attempts, that caused absolutely reverse consequences' (Malthus, 1993: 71).

Malthus considered voluntary assistance necessary and desirable, both in the moral and political aspect, as it promotes establishing solidarity among different classes of society; however, obligatory assistance corrupts the first and does not bring satisfaction to the others. Nevertheless, he clearly distinguished the goal and the means. The recognition of the right of the poor to receive assistance is possible and even useful, unless it causes negative consequences to the society as a whole. Malthus's position was as follows: a man must get married only when he is able to support his wife and six children. Such a position was fully justified when there was absolutely no family planning, wasn't it? Malthus acted wisely and humanely, when he proposed to pay an allowance to workers with more than six children, didn't he? 'One can object, that all this prudence [abstaining from marriage till certain possibilities] may be useless, as one can not predict how many children he would have and whether he would have more than six children. It is fair, and I believe that it could be quite possible to give allowance for every child after the sixth, but not as a bonus for a large family, but in order to help with the burden, that could not have been predicted before marriage. Consequently, the amount of the allowance should place him in the same position with the family with six children. As for the decree of Louis XIV, that envisaged certain advantages to families with ten or twelve children, Montesquieu remarks that such decrees could not promote the increase of population. I am enclined to state that such decree could be approved without any danger' (Malthus, 1993: 103).

Malthus was the son of his time and he could not envisage the family planning, moreover, family planning based on technology, but how can his descendants, who have turned child birth into one of the main sources of profit for the large part of the population of European countries, reproach him for the absence of sagacity. Malthus met the challenges of his time, he worried a lot about the growth of the cities, considering the conditions of existence there extremely dangerous for people, and took a consistent humanistic position, without falling into conservatism: '...we must admit, that the increase of population was being delayed by the success of civilization. The number of cities and factories is increasing, but the improvement of conditions of living there is hard to be expected. Of course, we must do our best to prevent the decrease of life expectancy, but we are unlikely ever to succeed in making the life in cities and the work at factories as healthy, as the life in villages and work in rural areas. Acting

as destructive forces, cities and factories reduce the need of barriers that prevent reproduction' (Malthus, 1993: 104).

According to Malthus the achievements of civilization themselves can not cause the reduction in population growth to such a degree that need for the moral curb of passions is eliminated: 'Are the cities and factories of Switzerland, Norway, Sweden the graves of humanity and do they prevent the possibility of surplus population? The ratio between rural population and urban in Sweden is 13:1, and in England – 2:1, nevertheless the growth of population in the latter is faster. How shall we correlate this fact with the statement, that the achievements of civilization are constantly accompanied by a corresponding weakening of the natural desire to reproduce? Norway, Sweden and Switzerland have been ruled rather satisfactorily, however, we do not notice here these 'preventive changes', that, according to Wieland, occur in any society due to the depletion of soil and that 'prevent many people from marriage and make more and more people unable to replenish decreasing population'. What prevents people in these countries from marriage, if not the lack of means to keep the family? What makes people unable to replenish, if not illnesses due to poverty and the lack of means? If our reflections about these and many other countries prove that early marriages cause the increase of deaths because of poverty, then how can we state that there is no moral basis to prevent such early marriages? As we know, the wages in many, maybe all, European countries are too low to support numerous families in good condition, so how can we state that population has not yet reached the extreme limits, and that the 'disasters arising from the excess population may occur only in a country populated to the point above which its means of existence can no longer increase?' (Malthus, 1993: 131).

SOCIALIST ROOTS OF MALTUS IDEAS

We should consider the combination of the afore-mentioned socio-democratic motives with a Stolipin-like hope for the middle class as an important and interesting feature of Malthus's ideology. Truly, in industrial England the representative of the middle class did not at all have the image of a strong farmer. Malthus continued his controversy with Wieland: 'This real reproduction should remain well below the maximum limit of the productive forces of the soil, giving means for food. This last condition follows, firstly, from the fact that we are not entitled to assume that art and industriousness of people in modern society could get the best *possible* use to meet this productive capacity, and, secondly, that the *largest [italics by Malthus]* production of nutrients **can not be achieved under**

the system of private property [*italics by the author*], as I explained before' (Malthus, 1993: 131–132).

Probably, the bridge between the quite socio-democratic attitude to the system of private property for the land and the quite bourgeois attitude to the middle class can form a non-acceptance of luxury by Malthus, both due to moral and economic reasons: 'There is no need for the rich to indulge in excessive luxury in order to maintain factories and for the poor to deprive themselves of conveniences in order to maintain population. The most useful factories are those, which maintain the needs of all population. On the contrary, if they satisfy the needs of the rich, they are not so important due to the limited demand for their goods, and, moreover, they can cause inconveniences, even problems, due to the changes of fashion, that rules them. Moderate luxury evenly distributed among all classes of society, but not the excessive luxury of a few – that is needed for the happiness and prosperity of people' (Malthus, 1993: 102). Malthus continues, expressing his hope for the middle class as the pillar of morality in society and the source of economic prosperity: 'Generally speaking, the middle position in society is the most advantageous for the development of virtue, industry and talent. But obviously, all people can not belong to the middle class. The upper and the lower classes are inevitable and very useful. If there was no hope for promotion and no fear to fall below in the society, if there was no commendation for hard work and no punishment for laziness, then there would not be such activity and zeal that make every man strive to improve his position and that is the main engine of social welfare' (Malthus, 1993: 102).

Malthus possessed not only insight, but vision. When he says that the prosperity grows together with the increase in the middle class, he remains true to humanistic principles and believes that technological progress will be the main factor of the growth of the middle class: 'Under the process when the lower classes become the middle classes (thanks to technological progress) each worker would have a hope that he could improve his position himself. Hard working and virtue would be praised. There would be more winners in the huge social lottery. The total of happiness would grow' (Malthus, 1993: 102). In spite of the common delusion, Malthus's works are full of social optimism, but not of premonition of disaster. True to rationalism principles, he called on his contemporaries to be realists, be courageous and work hard to achieve a better future: 'If the past experience could have given me hope that the improvement of social system was possible, or at least probable, than the fact of improbability would make me sad. On the other hand, the experience of the past does not give me a chance to hope for the better and that is why I view the natural difficulty, that we have to fight with permanently, without any sadness, as such fight enlarges human energy,

develops his capabilities, tempers his soul, makes him better in many aspects, to put it shortly, it is very useful for him. This view at the position of the society is much better, than the belief that we can easily get rid of all the troubles, unless the corruption of the people influencing social institutions spoiled different useful undertakings' (Malthus, 1993: 125).

METHODOLOGICAL INTUITION

It brings to mind a controversy between A.V. Lunacharskij (1875–1933) and A.I. Vvedenskij (1888–1946) about the origin of man. Vvedenskij having exhausted all his arguments said that he was ready to accept that Lunacharskij originated from a monkey, but he himself originated from God. To that Lunacharskij answered that he was ready to accept that he originated from a monkey, and that Vvedenskij originated from God, but he added that everyone who saw him, Lunacharskij, would exclaim 'What progress!', while, looking at Vvedenskij – 'What misery!' More than a century before that, Malthus, the son of the Enlightenment, a priest and theologian himself, was thinking in the same way. He was devoted to Reason: 'If ignorance is beneficial, there is no need in enlightenment. But if it is dangerous, if false views on social order stand in the way of progress, if they cheat on our hopes, then I think that feelings and expectations based on common sense are the source of comfort, and that people possessing this common sense are happier and they participate more in the process of improvement and consolidation of social welfare compared to those who rejected the truth' (Malthus, 1993: 125).

Social optimism, based on rationalism and courageous acceptance of objective realities, combined well with methodological intuition and placed Malthus well ahead of his time. Now, when the intellectual level in society is falling down catastrophically, now, when there is a dominance of empiricism in social sciences, and when the best known sociologists speak about the exhaustion of sociological theory, isn't it high time for us to listen to what he said two centuries ago? 'We have heard too many empty accusations against theories and their authors. People, who are against theories, boast of their devotion to practice and theory. We must admit that a bad theory – is a very bad thing, and the authors of such theories can harm the society. Nevertheless some defenders of practical methods don't notice, that they themselves fall into the trap, that they had been warning the others against, and that most of them could be called as the authors of the most vicious theories. When a person describes what he had a chance to watch, he increases the total mass of knowledge and thus benefits the society. But when he makes general conclusions or builds a theory on the basis of limited observation

of something, that happened at his farm or at his shop, and then he turns out to be even more dangerous, because he builds his theory on observation, but a reasonable theory must be based on general facts, and not on individual facts' (Malthus, 1993: 94). How far have we gone away from the views of Malthus? And have we been going forward?

At last we must study the question about the ratio between Malthus's views on the development of the society and his belief in God – we must study this question due to our respect for the personality of Malthus. He wrote: 'Without getting into too many details, we can establish on the basis of the teaching of apostle Paul the following general rule of Christian religion: marriage, unless it contradicts any higher obligations, is worthy of our approval, but if it contradicts them, is worthy of our censure. This rule fully corresponds to the demands of high morality: 'To understand the will of God it is necessary to appreciate the meaning of the deed in relation to the common good' (Malthus, 1993: 53). Further Malthus dwells upon this thought: 'I believe that the goal of the Creator is to have the Earth populated; but I think, that He wishes it to be populated with healthy, virtuous and happy people, but not with sick, vicious and miserable people. If under the pretext of obedience to the demand to bear and multiply we will populate the Earth with the latter breed, than we will be deprived of the right to blame the divine commandment for being unfair, and we will have to explain our own sufferings by the reckless fulfillment of the sacred law' (Malthus, 1993: 112).

To understand the origins of Malthus's philosophy, we should remember, that the science of the New Era did not arise from the ancient science, though it used it a lot. It arose from the medieval philosophical scholasticism, from an exclusively fruitful idea that was born at the turn of the 16th and 17th centuries, that God created two, but not one, books – Scripture and Nature. The founder of the New Era philosophy – Francis Bacon (1561–1626) – was an ardent defender of the empirical method of cognition; he died of a cold that he had caught during his experiments on freezing chickens. He wrote about God: 'For us not to have any delusions, He has given us two books: the Scripture – where the will of God is revealed, and then the book of Nature – where the power of God is revealed. Out of these two books, the second serves as the key to the first, it not only prepares our mind to understanding the true sense of the scripture, but mainly develops our belief, makes us seriously meditate on the divine omnipotence, which marks are imprinted on the stones of his creations' (Petrov, 1978: 118).

Thus, the second book may and must be studied with the use of rational, i.e., logical methods, i.e., doing an experiment and the interpretation of its results, these results being described with the use of mathematical formalisms. The possibility of the latter was founded not only on the progress of mathematics, but also on the unshakeable faith in the perfection of God's intention. Hence

Newton's famous dictum that the book of nature was written in the language of mathematics. I. Newton (1643–1727) was a deeply religious man and treated space as God's. Malthus was as religious as Newton and he viewed his scientific studies as his Christian duty.

Let us try to cast a general glance at the conception of Malthus from the huge distance that is between us. The situation in Black Africa, where there has been no progress in the per capita production of food for three decades, makes us acknowledge that old Malthus was not so wrong, after all, and if the population growth is not curbed, there is no possibility to solve the food problem (together with the ecological problem, as excess load on farmland and deforestation cause rapidly increasing desertification). The situation on other continents hardly denies Malthus's teaching. Except a few rich oil-producing countries, no one succeeded in escaping poverty without significantly reducing fertility. Take China, where the fertility now is lower than in France. It is hard to overestimate family planning, but it is very important to raise the marriageable age, especially the birth of the first child, which is what actually Malthus had in mind.

Malthus would be pleased to know that life conditions in cities developed so much, and that life expectancy there is often higher than in rural areas. Nevertheless, it is the rapid, we can say even the avalanche of urbanization in developing countries that causes the reduction in fertility. Finally, when we say that there is an optimum population, that its number has been exceeded long before, that the population on the Earth will be increasing for several decades, and then it will gradually start to decrease, and that it is not evil, but good, we follow in the steps of the old rationalist, don't we?

NEW REFUTATION?

If there is a person who actually refuted Malthus, it is S.P. Kapitsa. He showed with the help of the phenomenological theory of population growth on the Earth that world population was subject not to external, but to internal constraints (Kapitsa, 1999). Such a conclusion grossly contradicts common sense, but the most interesting things in science begin when we do not listen to common sense. Exactly that happened when the theory of relativity, gravitational theory or the theory of quantum mechanics, and in our era the superstring theory, were created. However, Malthus would hardly be disappointed with the results of Kapitsa – though he firmly believed in external constraints, Malthus was seeking the truth, but did not possess it arrogantly, and humility before the truth was typical for him to the same degree, probably, as the humility before God.

Maybe we have got captivated with quotations, but our goal is to restore the good name of Malthus, and it demanded from us giving him the floor himself. It is the only thing he needs to defend his views, and the understatement of his work, the rather low accessibility to the public are probably an unfortunate incident. One hundred and seventy five years ago a wonderful man, thinker and humanist, who was boundlessly loyal to the ideals of the Enlightenment and who deeply believed in God, died. We can do nothing for this man, who had suffered much because of the unfair attitude to his courageous search for the truth. In restoring the truth we try to render an adequate service to modern society, which is trying to solve the same problems as Malthus had been trying to solve, and often with less success. Paying tribute to the blessed memory of this man, we would like to finish our article with the same words with which Malthus finished his book: ‘...*the practical goal of the author of this book was to improve the fate and enlarge happiness of the lower classes of society* [italics by Malthus]’ (Malthus, 1993: 116).

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PROCESS OF AGEING OF ŚLĄSKIE VOIVODSHIP POPULATION UNTIL 2035

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ABSTRACT. The article presents changes in the structure of population by age in Śląskie voivodship between 1990 and 2035. The similarity of structures has been studied with the use of taxonomic algorithm and the time distributions of senility and load indices of the population in general while taking sex and place of residence into consideration have been presented. The process of population ageing is more and more intensive. Less and less numerous age groups that reach the productive age and more and more numerous age groups that enter the retirement age show that Śląskie voivodship, similarly to the whole area of Poland and other European countries, will have to face the problem of population ageing. This challenge is particularly hard to confront because of the low level of professional activity of the people over 50 years of age.

KEY WORDS: Poland, Śląskie voivodship, population structure, population ageing, age pyramid, index of demographic load, structural similarity measure.

INTRODUCTION

Demographic changes in Śląskie voivodship after 1989 – similarly to the whole country – were characterized by a rapid decrease in demographic dynamics, that had mainly resulted from the decrease in the number of births, which reflected violently decreasing women's fertility and the number of children they had during their reproductive age. At the same time a significant improvement in mortality rate characteristics which brought distinct extension of expected lifespan was observed. Those changes influenced the population structure by age and, as a consequence, also the relations between three economic groups. The share of people at the pre-productive age decreased and the share of old age group of people increased in the total population. This caused intensification of the process

of population ageing. Population ageing brings various consequences including deterioration of the health state, increase in the number of old aged people and the growth in the number of disabled people. Anticipated increase in the number of old aged people means larger state budget burden because of higher maintenance costs of elderly people (increase in the burden of systems of social insurance, old-age pension and disability payment, social welfare and increase in medical services) (Szymańska et al., 2009). Following the ageing of society the decrease in work resources and their ageing will proceed, which will have a significantly unfavourable consequences for the job marketplace.

The article presents changes in the structure of the population by age in Śląskie voivodship between 1990 and 2035. Similarity of structures with the use of taxonomic algorithm has been studied and distributions of senility and load indices have been presented while taking into consideration sex and place of residence.

We searched for the answers to the following fundamental investigative questions: (A) Is there a tendency to lower the degree of similarity in the age structures? (B) How has the process of changes in functional age groups of the population been proceeding? (C) What is the dynamics and degree of progression of population ageing process between 1990 and 2035? (D) How are the observed changes in the population ageing process situated in the context of comparisons between the voivodships? GUS (Central Statistical Office) statistical data on the structure of population by sex, age and place of residence and recent population forecast for the years between 2008 to 2035 have been used in the study (1).

CHANGES IN POPULATION AGE PYRAMID

The most important changes in the structures of population between 1990 and 2035 will be characterized by means of age pyramids, measure of similarity of structures and indices that define the share of population by the functional age groups (pre-productive, productive and post-productive) that are fundamental from the point of view of the job market. Fig. 1 to 3 present age pyramids for selected years from the studied time interval (as for the state of 31st December).

Two demographic explosions ('bulges') are clearly distinguished in the structure of the population. The first one is the explosion of the post-war period (baby boom), the representatives of which will reach the post-productive age in the next few years, and the other is an echo of the post-war explosion, that is, the people born at the turn of the 1970s and 1980s of the 20th century. The most distinct gap in the pyramid of the 1990 refers to the age group of 20 to 24 years of age. These are age groups born during the first post-war depression between

PROCESS OF AGEING OF ŚLĄSKIE VOIVODSHIP POPULATION UNTIL 2035

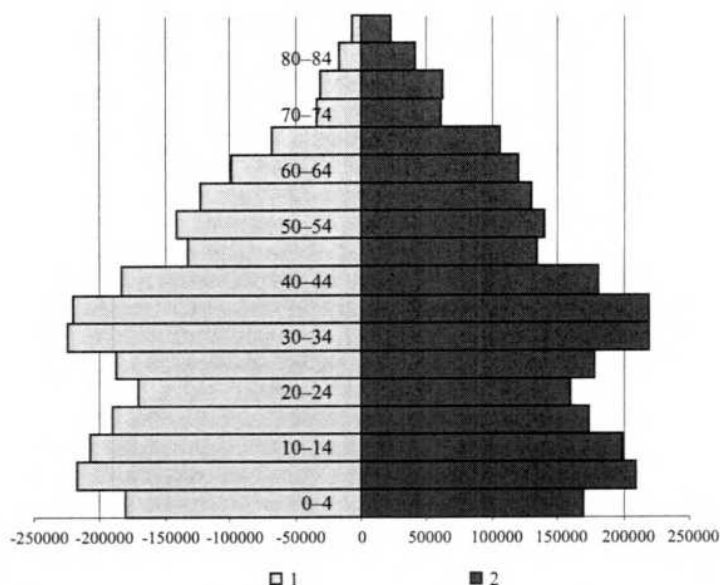


Fig. 1. Population by sex and age in Ślaskie voivodship in 1990
Explanation: 1 – men; 2 – women

Source: Own study

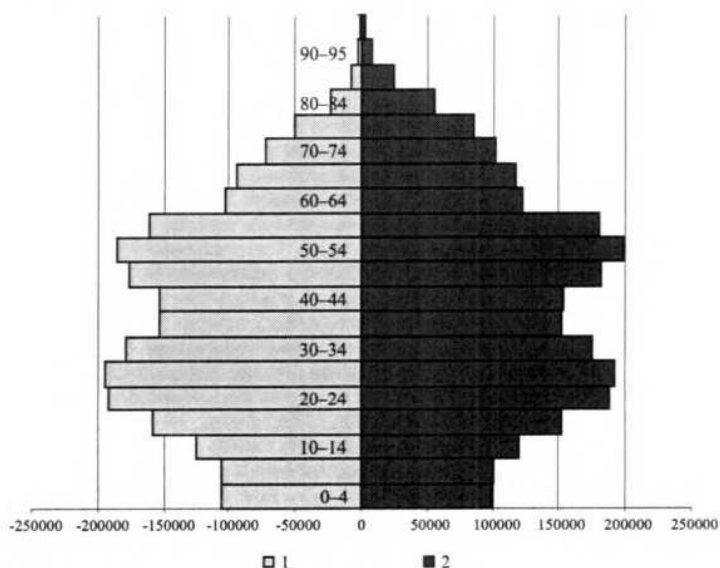


Fig. 2. Population by sex and age in Ślaskie voivodship in 2007
Explanation: 1 – men; 2 – women

Source: Own study

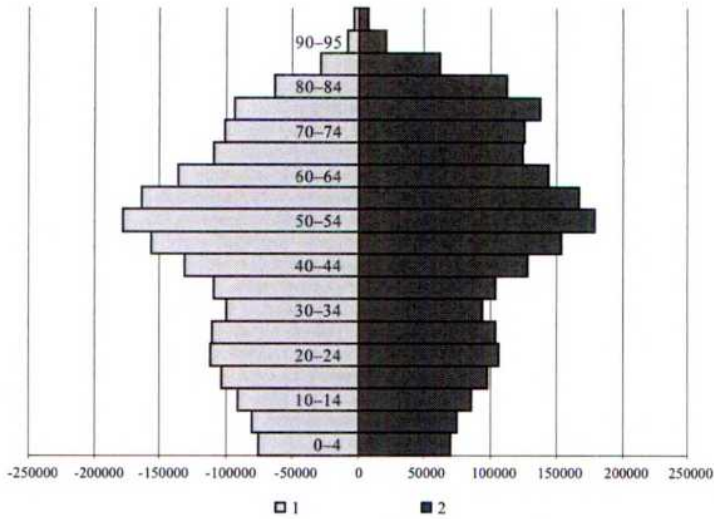


Fig. 3. Population by sex and age in Ślaskie voivodship in 2035

Explanation: 1 – men; 2 – women

Source: Own study

the years of 1966 to 1970. The age pyramid of 2007 (which forms the basis for the prognostic calculation) has a narrow base, which is a result of birth rate depression in the last decade of the 20th century.

In the pyramid for 2035 we can observe regularities that were discussed before but shifted up by 28 years. Deferred births of the population explosion from 1976 to 1984 will contribute to the growth of having children by women in the first years of the next decade (about 2012). After this period the decrease in the number of births is expected, which is proved by the basis of the pyramid in 2035 (2).

Changes in natural activity and in the actual growth of the Ślaskie voivodship population between 1990 and 2035 are presented in Fig. 4 and 5.

Undoubtedly, with the flow of time the Ślaskie voivodship population structure is going to be more and more similar to regressive pyramid, the pyramid that is typical of population that is growing old.

The assessment of similarity in population structures can be performed by means of the method of structure taxonomy (Chomałowski, Sokołowski, 1978: 217). It is a taxonomic algorithm that allows to perform a division of studied objects (structures) into uniform groups, at a given critical level of similarity α (that corresponds to the critical distance from the method of Wrocław taxonomy) specified freely on the level from the range of (0.1). The principle that

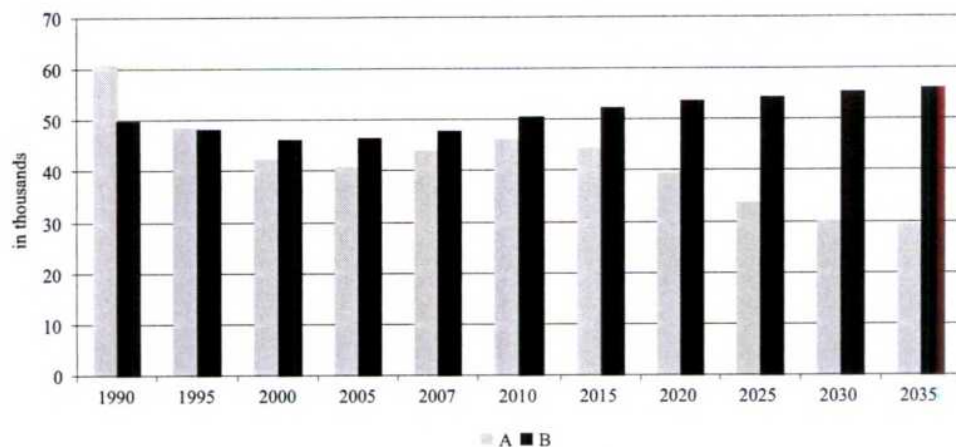


Fig. 4. Births and deaths in Śląskie voivodship between 1990 and 2007 and the forecast until 2035

Explanation: A – births; B – deaths

Source: Own study

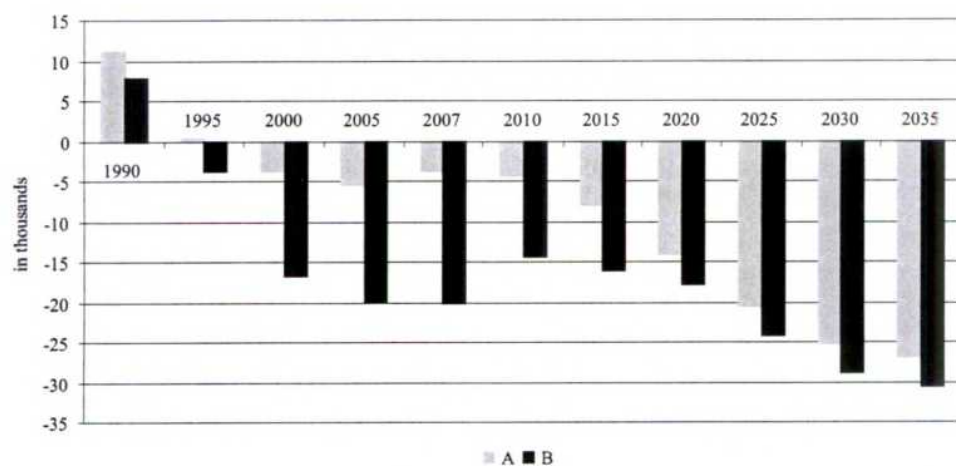


Fig. 5. Birth rate and actual growth of Śląskie voivodship population between 1990 and 2007 and the forecast until 2035

Explanation: A – birth rate; B – actual growth

Source: Own study

only the elements of the structures of which are similar in pairs is accepted as the criterion for division. Similarity is defined for pairs of structures by means of the similarity measure:

$$P_{ij}^* = \sum_{k=1}^r \min(p_{ik}, p_{jk})$$

- i, j – object numbers,
 k – the number of the structure component,
 p_{ik} – k share of this component in the i object structure,
 p_{jk} – k share of this component in j object structure.

Similarity measure of structures is included in the range of (0.1). If the structures are completely different, then $P_{ij}^* = 0$, and if they are identical then $P_{ij}^* = 1$. Table 1 presents similarity measures of age structures for selected years from the studied period of time with the structures of 1990 and of 2007.

Table 1. Measures of similarity in age structures in Śląskie voivodship in selected years and the structures from 1990 and 2007

Year	1990	1995	2000	2005	2007	2010	2015	2020	2025	2030	2035
1990	1.000	0.933	0.886	0.861	0.852	0.849	0.852	0.824	0.788	0.760	0.763
2007	0.852	0.870	0.915	0.975	1.000	0.958	0.905	0.875	0.866	0.871	0.858

Source: Own calculations

The values of measure indicate low similarity of age structures compared with the structure of 1990. What is more, there is a constant tendency to decrease this similarity. The reasons of this phenomenon may include instability of the birth intensity, changes in the order of mortality rate as well as migrations. A similar tendency can be observed in the case of the value of the similarity measure in future structures compared with the structure of 2007. The results of conducted analyses allow to give a positive answer to the first question presented at the beginning.

Then, adopting a critical level of similarity $\alpha = 0.1$ (3), a division of age structures in particular years into uniform groups was performed, that is: Group 1 – 1990, 1995; Group 2 – 2000, 2005, 2007; Group 3 – 2010, 2015; Group 4 – 2020; Group 5 – 2025, 2030; Group 6 – 2035.

From the point of view of the needs of the job marketplace analysis it is important to study the changes in structures according to groups of the pre-productive, productive and post-productive age that are called functional ones (4). Changes in the number and structure of the population according to the functional age groups are presented in Table 2 and Fig. 6.

Table 2. Population of Ślaskie voivodship by functional age groups between 1990 and 2035

Years	a	From the total:			
		b	c	d	e
1990	4,957.2	1,407.2	2,981.8	568.2	1,201.5
1995	4,907.9	1,291.6	2,999.7	616.6	1,238.7
2000	4,758.9	1,086.3	3,007.4	665.2	1,346.6
2005	4,685.8	885.2	3,063.0	737.6	1,528.0
2007	4,654.1	835.7	3,051.6	766.8	1,596.6
2010	4,611.9	789.4	3,010.4	812.1	1,676.2
2015	4,534.6	765.1	2,841.7	927.8	1,731.0
2020	4,447.1	763.5	2,639.9	1,043.7	1,752.5
2025	4,338.2	738.1	2,490.9	1,109.2	1,799.9
2030	4,202.1	667.8	2,406.7	1,127.6	1,879.1
2035	4,052.3	595.9	2,313.5	1,142.9	1,964.0
A	-18.3	-57.7	-22.4	+101.1	+63.5
B	-12.9	-28.7	-24.2	+49.0	+23.0

Explanation: A – change 2035–1990 in %; B – change 2035–2007 in %; a – total; b – 0–17 years; c – 18–59/64 years; d – 60+/65+ years; e – 50 years and more

Source: Own study on the grounds of WUS in Katowice (Statistical Office of the Voivodship), Prognoza ludności na lata 2008–2035, <http://www.stat.gov.pl/>

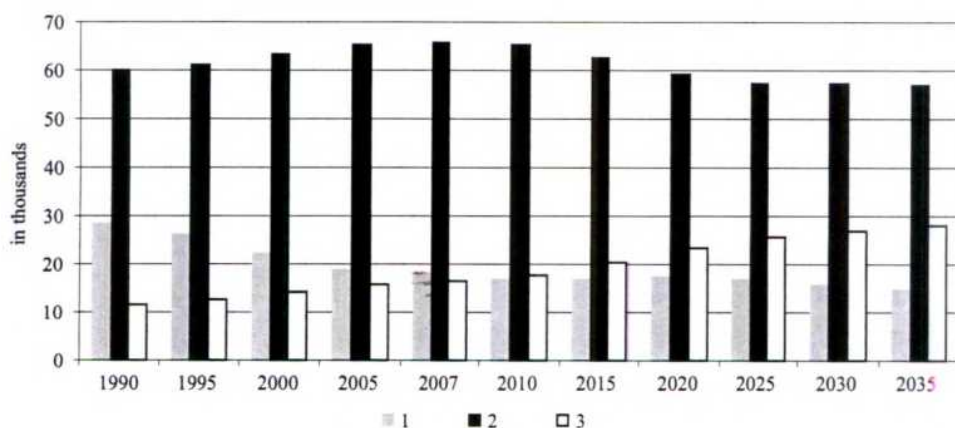


Fig. 6. Ślaskie voivodship population by functional age groups between 1990 and 2035
Explanation: 1 – 0–17 years; 2 – 18–59/64 years; 3 – 60+/65+ years

Source: Own study

The analysis of data in Table 2 lets us formulate important observations. The number of population in Śląskie voivodship is going to decrease during the period between 1990–2035 by 18.3% (904.9 thousand people), while in the period between 2007–2035 by nearly 13%. The decrease in the number of people will involve two functional age groups: the community of people at the pre-productive and productive age. However, the number of people at the post-productive age is going to increase significantly; a more than double increase in 2035 against 1990 and by 49% against 2007. Starting from 2010 the number of population at the post-productive age is going to be higher than the number of people between 0 and 17 years of age.

The number of people who are 50 years old and over is growing systematically. During the period between 1990 and 2007, the number grew by a third, and according to the forecast, in 2035 it is to grow by almost a fourth if compared with 2007. If in the first years of the 1990s every fourth inhabitant of the voivodship was 50 years old or over, then in 2035 it is the case with every second.

Also, the share of people who are over 60/65 years of age and older has been undergoing regular changes (Fig. 6) from 11.5% in 1990 to 16.5% in 2007 and 28.2% in 2035. The above observations as well as a more detailed analysis of changes in the structure of population during the years between 1990 and 2007 prove a progressive ageing of population, visibly more intensive in the subpopulation of women. The period between 1990 and 2007 was characterized by intensive changes both on the top of the pyramid and at the basis of the age pyramid, while the decrease in the share of the people who are between 0 and 17 years of age was faster (by 10.4%), than the increase in the share of elderly people (by 5%). The process of ageing of the Śląskie voivodship population is going to be continued in the future. The growth in ageing intensity from 2015, which is a result of entering the group of elderly people by those who belong to the post-war population boom, can be particularly clear. It is going to be characterized by changes at the base and at the top of age pyramid, but as contrasted to the period between 1990 and 2007, definitely more intensive in the oldest age group. During the period between 2007 and 2035 the growth in the share of elderly people is going to be faster (by 11.7%) than the decrease in the share of the youngest population (3.3%).

On the other hand, the share of the post-productive age population in the total number of people was growing from 60.2% in 1990 to 65.5% in 2007. Yet, from 2010, a systematic decrease in this share up to 57.1% is expected in 2035 (decrease by 8.4%).

POPULATION AGEING

In the first stage of the analysis the index of demographic senility, defined as the share of people who are over 65 years of age in the whole studied population and the indices of load of the population at the post-productive age (18–59/64 years of age) with the people at the pre-productive age (0 to 17 years of age) and the post-productive age (60/65 years of age), was applied to assess the process of population ageing.

Table 3 additionally shows the changes in the number of people who are 65 years old and over, in time.

Table 3. Population of subjects who are 65 years of age and over by sex and place of residence during the years between 1990 and 2035

Years	A			B		
	a	b	c	a	b	c
1990	448,753	156,649	292,104	*	*	*
2000	548,136	205,117	343,019	122.1	130.9	117.4
2010	657,588	255,017	402,571	120.0	124.3	117.4
2020	866,492	345,829	520,663	131.8	135.6	129.3
2030	997,703	403,264	594,439	115.1	116.6	114.2
2035	999,416	405,898	593,518	100.2	100.7	99.8
Years	C					
1990	343,393	117,466	225,927	*	*	*
2000	421,955	156,962	264,993	122.9	133.6	117.3
2010	517,045	199,668	317,377	122.5	127.2	119.8
2020	690,429	272,178	418,251	133.5	136.3	131.8
2030	777,633	308,258	469,375	112.6	113.3	112.2
2035	767,617	305,729	461,888	98.7	99.2	98.4
Years	D					
1990	105,360	39,183	66,177	*	*	*
2000	126,181	48,155	78,026	119.8	122.9	117.9
2010	140,543	55,349	85,194	111.4	114.9	109.2
2020	176,063	73,651	102,412	125.3	133.1	120.2
2030	220,070	95,006	125,064	125.0	129.0	122.1
2035	231,799	100,169	131,630	105.3	105.4	105.3

Explanation: A – Śląskie voivodship; B – indices of dynamics (previous year in the table = 100); C – city; D – village; a – total; b – men; c – women

Source: Own study

The highest increase in the number of elderly people was observed in the 1990s in total populations, and for the cities. In the decade between 1990 and 2000, the number of elderly men was growing faster than the number of elderly women (by 30.9% and 17.4% respectively), which can be associated with, among others, the improvement in the characteristics of mortality in the subpopulation of men. As a consequence, the share of men in the population of elderly people grew from 34.9% in 1990 to 37.4% in 2000. The population forecast shows that the increase in the number of men who are over 65 years of age, that is faster than in the number of women at this age is anticipated. In 2035 the number of men is going to be higher by 62.5% than in the forecast starting year, that is in 2007, and the number of women – by 50.4% (5). The post-war demographic boom is going to be reflected during the years between 2010 and 2020 in extremely high growth regardless of the sex and place of residence. However, a higher increase in the number of elderly men ought to be expected in urban areas (increase by 36.3%) than in the rural areas (increase by 33.1%). The process of ageing is going to be significantly impeded in the period between 2030 and 2035 (the number of elderly men is going to be higher only by 0.7% and in case of women it is going to decrease by 0.2%). However, between 2020 and 2030 an increase in the number of elderly people in rural areas is going to be higher than in urban areas. It might be related to the process of suburbanization, that is, moving of households (families) to suburban areas around large industrial and shopping centres. Suburbanization processes started in Poland, and also in Śląskie voivodship at the end of the 1990s. Between the years of 1990 and 2007, the share of migration from cities to the country in the area of Śląskie voivodship grew by 13.5% (Sojka, 2007: 119). According to presumptions adopted in the forecast for the years between 2008 and 2035, these processes are going to be continued in the next few years (6).

In order to assess the progress of the population ageing process the indices of demographic ageing, in which the values result from the intensity of changes in the number of elderly people and changes in the number of the whole population were applied, and their graphic illustration is presented in Fig. 7.

The share of seniors who are 65 years of age or over increased between 1990 and 2007 by 4.7%, reaching as high as 13.8% of the total population. Therefore in the future an increased rate of the process of population ageing should be expected. In 2035 every fourth voivodship inhabitant is going to be 65+. The process of population ageing is of a dual characteristics, which means that within the group of elderly people the number of the oldest group of people is growing the fastest.

If we separate the people who are 80 years of age and over from the group of seniors, it appears that this group is going to grow extremely fast. As a result

PROCESS OF AGEING OF ŚLĄSKIE VOIVODSHIP POPULATION UNTIL 2035

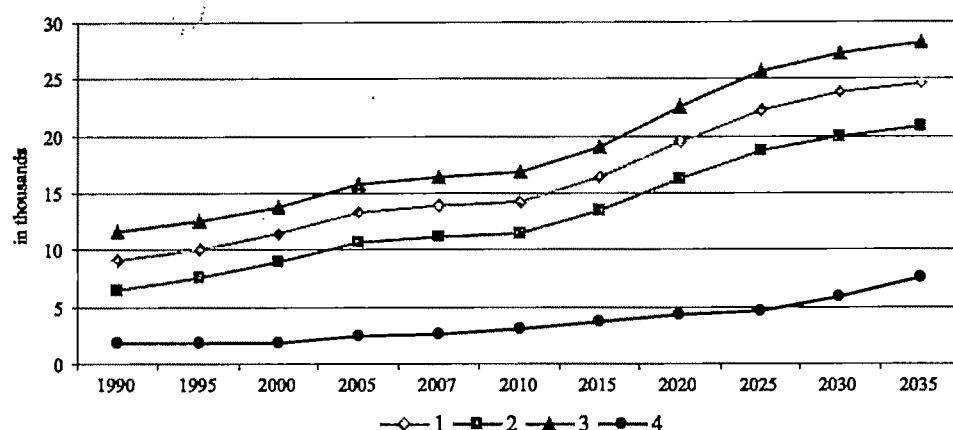


Fig. 7. Indices of demographic ageing by sex in Śląskie voivodship during the period between 1990–2007 and the forecast for the years 2010–2035

Explanation: 1 – total 65+; 2 – men 65+; 3 – women 65+; 4 – total 80+

Source: Own study

in 2035, every 13th voivodship inhabitant is going to belong to the so-called 'fourth-age group'. Analyzing the expected changes in the process of population ageing we should study the changes in economic load coefficients, that present the relationship between economic age groups in a synthetic way (cf. Table 4 and Fig. 8).

Table 4. Economic load coefficients by place of residence during the years from 1990 to 2035

Years	Economic load coefficients (in%) *					
	A		B		C	
	W ₁	W ₂	W ₁	W ₂	W ₁	W ₂
1990	47	19	46	18	51	24
1995	43	21	42	20	48	24
2000	35	22	34	21	42	25
2005	29	24	29	22	29	26
2007	27	25	26	25	32	25
2010	26	27	25	27	29	26
2015	27	33	27	34	28	29
2020	29	40	29	41	28	34
2025	30	45	30	46	29	40
2030	28	47	28	48	27	44
2035	26	49	26	50	25	48

Explanation: A – Śląskie voivodship; B – City; C – Village; * $W_1 = L_{0-17} / L_{18-59/64}$, $W_2 = L_{60/65+} / L_{18-59/64}$

Source: Own calculations

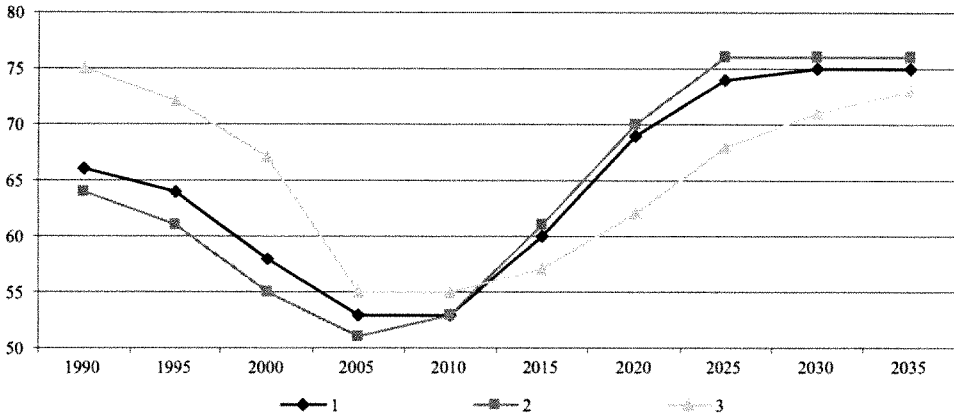


Fig. 8. Total economic load coefficient ($W_c = W_1 + W_2$) by place of residence during the period between 1990 and 2035

Explanation: 1 – total; B – city; C – village

Source: Own study

During the period between 1990 and 2005 there was a decrease in total load coefficient in general from 66 to 53 people at 0–17 years of age and 60/65 and over, for 100 people at 18–59/64 years of age. This decrease was mainly caused by the fall in the value of load coefficient by people at the pre-productive age. Urban and rural populations are characterized by a similar tendency of changes, while in the case of the latter, the fall was significantly higher (from 75 in 1990 to 55 in 2005). Also in this period, the load of population at the productive age with elderly people was higher in villages than in cities. Regardless of the residence place in 2005 there was one person at 60/65+ years of age for every 4 people at the productive age. Starting from 2010 in the cities, and from 2015 in villages, the increase in the value of total load coefficient should be expected respectively, up to the level of 76 in the city, and 73 in the village in 2035, which will be caused mainly by the growth in the load coefficient by the people at 60/65 years of age and over. There is going to be a difficult situation in the cities of the voivodship. From 2020 at least 70 people in the non-productive age is going to fall for 100 people in the productive age. In fact, the actual load is going to be even higher because there are also people who cannot work because of various reasons in the group of people at the productive age. Not only economic changes are behind the process of ageing but also challenges of health and social nature (change in the structure of consumption, increase in the demand for services in the sphere of health care and social care, growth in expenditures to maintain the growing number of post-productive population). This is going to require many

actions from the state in the sphere of adaptation of infrastructure and financial resources to various fields of social and economic life.

To make the assessment of the level of advancement of the ageing process of Śląskie voivodship population complete, the senility measure suggested by M. Cieślak (Cieślak, 2004: 9) was additionally applied. Senility measure based on mean age and the index of asymmetry is represented by the following formula:

$$S_i = M_i (-A_i + 2)$$

S_i – the senility measure in i of this population,

M_i – i mean age in this population,

A_i – asymmetry index in i of this population (7).

Senility measure equals the mean age if the value of asymmetry index equals one and then the population has the youngest age structure. As the age structure is ageing, the senility measure is a multiple of the mean age (cf. Table 5).

Table 5. Characteristics of the ageing process of Śląskie voivodship population between the years 1990 to 2035

Year	A	B	C	D
1990	33.9	0.322	56.90	9.1
2000	37.1	0.223	65.93	11.5
2007	39.1	0.138	72.00	13.8
2010	40.5	0.090	77.35	14.3
2020	42.9	-0.125	91.16	19.5
2035	46.3	-0.135	98.85	24.7

Explanation: A – age mean, B – asymmetry index; C – senility measure; D – percentage of people at 65+ years

Source: Own calculations

Since 1990 general regularities have been lying in the growth in the value of mean age and the decrease in the strength of right-sided asymmetry until the year of 2017 inclusive, when the distribution of age is almost symmetric ($A_{2017} = 0.005$; $M_{2017} = 41.7$; $S_{2017} = 83.16$). These results are the effects of changes in the process of economical population reproduction (decrease in fertility and the number of children born to a woman, decrease in mortality). Starting from 2018, the asymmetry index assumes adverse values and as the years pass the power of asymmetry is growing. The appearance of asymmetric left-sided age distribution in the future would mean, as M. Cieślak writes, that ‘the population abandons the attempts that aim at maintaining their number’.

Graphic illustration of age distribution of the population in the years of 1990, 2017 and 2035 is presented in Fig. 9–11.

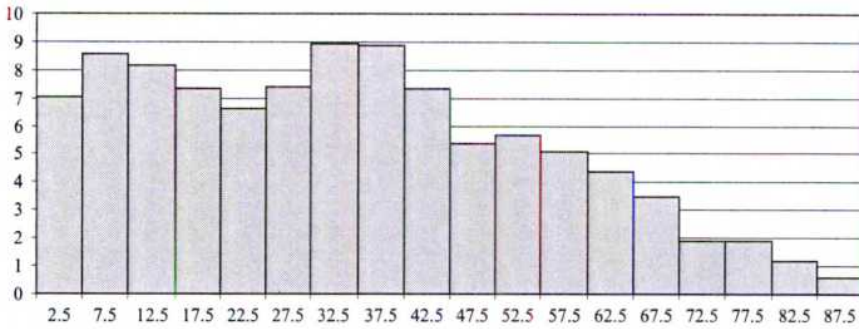


Fig. 9. Age distribution of Śląskie voivodship population in 1990

Source: Own study

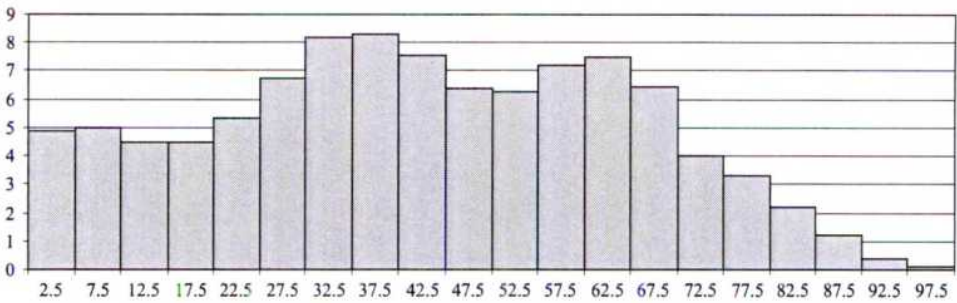


Fig. 10. Age distribution of Śląskie voivodship population in 2017

Source: Own study

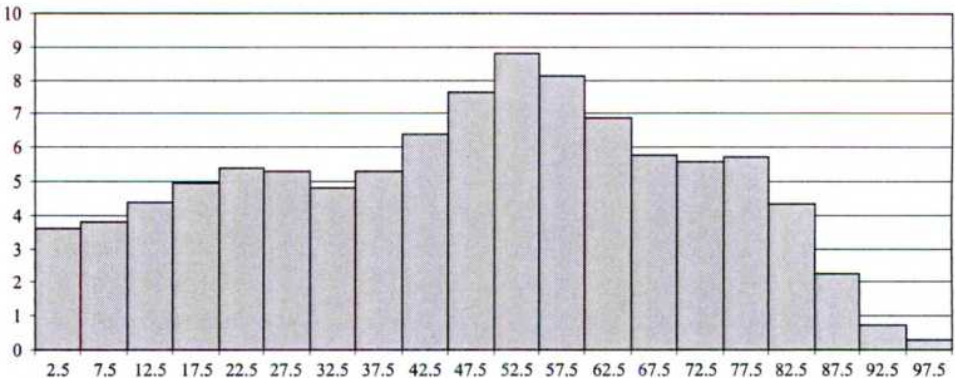


Fig. 11. Age distribution of Śląskie voivodship population in 2035

Source: Own study

ŚLĄSKIE VOIVODSHIP AGAINST THE COUNTRY

Voivodships of Poland show quite a significant diversity with regard to the process of population ageing. In 2007 two voivodships, that is Łódzkie and Śląskie had the highest middle age – 39.7 and 38.8 years of age respectively. Podkarpackie and Warmińsko-Mazurskie were the youngest voivodships with the mean age not higher than 35.5 years. It ought to be remembered that in Łódzkie voivodship the mean lifespan of men was the shortest in Poland and in 2007 it was 68.7 years of age. It is over four years shorter than in Podkarpackie voivodship, that for many years has been the leader as for the lifespan. In the case of women, lifespan diversity is less significant. The female inhabitants of Łódzkie voivodship live the shortest – for 78.7 years and of Śląskie voivodship – for 78.8 years while the female inhabitants of Podkarpackie voivodship live for 80.9 years. It should be mentioned that Warmińsko-Mazurskie voivodship belongs to the group of voivodships with the highest number of children born to a woman (8).

According to GUS (Central Statistical Office) during the period between 2007 and 2035, the median of population age is going to grow in the range from 9 to 12 years suitably to the voivodship. The largest increase in the mean age is going to appear in Podkarpackie voivodship and the smallest in Łódzkie and Mazowieckie voivodships. In four voivodships the average age of their inhabitants is going to be higher than 49 years of age in 2035, including Śląskie voivodship, and half of inhabitants of Świętokrzyskie voivodship is going to be at least 50 years of age. According to expectations, in the majority of voivodships the process of population ageing is going to proceed. The share of elderly people (65+) shall reach the level of 25% in four voivodships: Świętokrzyskie, Opolskie, Śląskie, and Łódzkie. Between the years of 2007 and 2035 the smallest increase in the percentage of people at 65 years of age and over shall be observed in Mazowieckie and Małopolskie voivodships (9). They are the voivodships that are characterized by a positive balance of internal migration for permanent residence. Considering the fact that the migration is selective because of age – young people, at matrimonial age, migrate more often, which corresponds to higher fertility and the number of children born to one woman and also a smaller share of elderly people in total population number in the areas of inflow.

Assessing the position of Śląskie voivodship against other voivodships of Poland it should be stated that the voivodship is going to be characterized by relatively higher level of demographic senility.

SUMMARY

Transformations of the process of population reproduction during the last few years of the 20th century, that were taking place together with the processes of modernization, influenced the changes in the population age structure during the period between 1990 and 2007 and they are also going to be unfavourably reflected on future structures of population by age in Śląskie voivodship and also in the whole country. In 2035, mean age is going to reach the level of 49 years of age (16 years more than in 1990 and 10 years more than in 2007), and in its composition, the population of Śląskie voivodship is going to comprise almost ¼ of elderly people (at the age of 65 and over). The process of ageing is going to encompass both women and men, although it is going to be significantly slower among the latter group which shall make the difference even deeper with regard to sex. In Śląskie voivodship (just like in the whole country) a group of people who are at least 85 years of age is going to appear. Their number was growing from 30.4 thousand in 1990 to 46.3 thousand in 2007 and is still going to grow fast up to 72 thousand in 2015 until 2025 when it is going to reach 97.2 thousand, which means doubling the number since 2007. The share of those people in the whole population is going to grow from 1% in 2007 to 1.6% in 2015 and 2.3% in 2025 until it reaches 3.2% in 2035. Therefore the demand for services related to care about elderly people is going to increase considerably. This problem is mainly going to refer to women. In 2015, feminization coefficient in the group of 85 and over is going to reach 262 and in the group of 90 years of age and over it is going to reach 338.

It appears from prognostic data that demographic marketplace infrastructure in the voivodship is going to shrink systematically, while the largest decline is going to appear between 2011 and 2020. First of all demographic potential of younger work resources is going to decrease (particularly in the decade between 2020 to 2030), which brings specific consequences. On the one hand the pressure to employ new labour force is going to decrease and on the other, we can observe the increase in the group of people at the non-mobile age that is characterized by low spatial and professional mobility and that responds to impulses of the job marketplace very weakly, which, as a consequence can intensify emphasis on enterprises of a social and protective character towards those elderly work resources. These expected but unfavourable relationships of changes in both sub-groups of the productive age can cause work deficiency in economy and encourage active immigration policy.

NOTES

- (1) The status of population by sex, age and voivodships as for the day of 31st December 2007 provided the grounds for calculations. The forecast was prepared separately for each individual voivodship and the results were summed up for the whole country. The increase in the value of the coefficient of the number of children a woman had according to tendencies observed during the years between 2004–2007 was assumed, and gradual convergence of differentiations between voivodships registered in the starting year was adopted. On the level of Śląskie voivodship, these values are going to increase from 1.24 to 1.44 in cities and up to 1.36 in the country. The increase in the average lifespan from 70.7 to 76.9 years of age was assumed with reference to men and from 78.8 to 82.2 years of age for women. The forecast of internal migrations for Śląskie voivodship takes into consideration the existing distribution of population inflow and outflow. Finally, in the forecast, the growth in the number of internal migrations until 2012 and then their gradual decrease are anticipated. In case of migrations abroad for permanent residence adverse balance that is decreasing in time has been assumed (cf. *Prognoza ludności na lata 2008–2035*).
- (2) During the period of time included in the study, the number of population in Śląskie voivodship is going to decrease by around 600,000 people. Considering the fact that the number of deaths is going to be higher than the number of births, we should expect an adverse birth rate while after 2015 natural decrease in population is going to be higher and higher (in 2010 – 4.4 thousand people, in 2020 – 14.2 thousand, in 2035 – 26.8 thousand people).
- (3) Adoption of various levels gives various divisions. The smaller the α value, the sharper the division, that is, the bigger number of groups and the more numerous individual points, that is, one-element groups.
- (4) The pre-productive age group includes population at 0–17 years of age, productive at 18–59 years of age (women) and 18–64 (men), post-productive: 60 years of age and over (women) and 65 years of age and over (men).
- (5) The number of men at 65+ years of age is going to be over 2.5 times higher in 2035 than in 1990, and in case of women we should expect a double increase.
- (6) In cities an adverse balance of internal migrations is anticipated because of the outflow of people from big cities to suburban areas near the cities. In villages, positive balance has been assumed.
- (7) Standardized Charlie index from the list of asymmetry indices after the analysis of their properties has been used.

- (8) In 2007 the coefficient of theoretical number of children for every woman in this voivodship was 1.398, while in Silesia region – 1.211. However, the lowest number of children for every woman was characteristic of the women residing in Opolskie voivodship – 1.042, and the highest in Pomorskie voivodship – 1.455. In Podkarpackie and Warmińsko-Mazurskie voivodships a gradual growth in the coefficient of the number of children for every woman is expected in the whole predicted period.
- (9) In these voivodships the increase in the number of people during the years 2007–2035 is expected respectively by 5.4% and 1.5%.

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POLISH MIGRANTS IN URBAN SPACE OF DUBLIN

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ABSTRACT. The end of Cold War in the late 1980s of the 20th century and the accession to EU in 2004 brought spectacular changes in Polish migrations during the last 20 years. The opening of borders in 1989 and labour markets for Poles in 2004 caused fundamental changes in the scale, intensity and directions of Polish migrations. This paper is an attempt to analyze the Polish wave of migration to Ireland, which is one of the three states that opened labour market for workers from the 'new EU' in 2004 without any restrictions. The special attention is paid to Dublin, where the presence of Polish immigrants is very visible both at the statistical level and within social and urban space.

KEY WORDS: Ireland, Dublin, Polish migration, labour market, urban space.

INTRODUCTION

Mobility of people is a very crucial social phenomenon observed in the history of civilization and contemporary world. The scale, motivation and distance are the factors which diversify migrations in time and space. S. Castles (2008, 2010) observes that traditional term of migration amounts to permanent (or at least long-term) movement from one nation-state to another, following the patterns of labour migration and settlement migration seen as typical of the 19th and 20th centuries. The 21st century by contrast is seen as an era of fluidity and openness, in which changes in transportation, technology and culture are making it normal for people to think beyond borders and to cross them frequently for many reasons. Movements for purposes of study, professional advancement, marriage, retirement or lifestyle are assuming greater significance, so that older ideas on migration are thought to be no longer relevant.

There is a very intensive discourse on factors determining migrations in theoretical deliberations of over the last hundred years. D. Massey (1999) compiled the main theories of mobility and prepared a synthesis in the form of causative factors of migrations. Firstly he noticed that international migrants tend not to come from poor isolated places that are disconnected from world markets, but from regions and nations that are undergoing rapid change and development as a result of their incorporation into global trade, information and production networks. Next factor is very obvious and undisputed. International wages differentials are not the only factor motivating people to migrate, however the most important. Moreover mass migrations are the consequence of permanent labour demand in the developed countries. In turn migration networks and other links between countries affect the scale and dynamics of migration. D. Massey underlines that social capital is an important determinant of movement. And finally the author notices that migration influences socio-economic processes not only in the receiving countries, but also in the sending states. It seems that factors cited above can be a relevant base for an analysis of characteristics of Polish migration to Ireland (Table 1).

Table 1. Polish migration to Ireland in the context of Massey's determinants of migrations

Massey's causative factors of migrations	Polish analogies in decisions on migration to Ireland
Sending countries – undergoing rapid change and development	Socio-economic transformation from 1989; accession to EU in 2004
Diversification of wages in sending and receiving countries	Strongly higher wages and better social safety in Ireland than in Poland
Mass migrations are the consequence of permanent labour demand in the developed countries	Dynamic development of Ireland in the turn of the century; absorbent labour market; high unemployment in Poland and lack of workplaces
Migration networks deciding on the scale and dynamics of migration	Migration to 'someone' – family, partner or friend; mistaken identity of both countries (religion, mobility, social structure, complicated history, etc.)
Social capital as the important determinant of mobility	Relatively high level of education of Polish immigrants (often better education and qualifications than Irish)
Influence of migration on socio-economic processes not only in receiving countries, but also in sending states	Improvement of the conditions and quality of life at family home; new social and family problems (separation of families, divorces, children without one or both parents)

Source: Own elaboration based on Massey, 1999

POLISH MIGRATIONS AFTER 1ST OF MAY 2004

The opening of labour markets for new members by three EU member states on 1st May 2004 was a crucial impulse for the outflow of Poles, mainly to United Kingdom and Ireland. The stream of migrations to UK, Ireland and Sweden increased four times after 2004, while the force of migrations to Germany, USA and Italy declined by 50% during analogical period (Table 2). Before Poland's accession to EU those countries were typical and most popular directions of Polish migrations.

Table 2. Essential changes in the directions of Polish migrations after 2004

Receiving countries	A		B	
	a	b	a	b
	c			
Great Britain, Ireland , Sweden	12.1	42.2	10.3	46.5
Germany, USA, Italy	62.9	36.1	63.7	34.8

Explanation: A – migrants; B – short-term migrants; a – before EU accession; b – after EU accession; c – in thousands

Source: Own evaluation based on Grabowska-Lusińska, Okólski, 2009

While the United Kingdom was historically one of the main directions of Polish migrations, Ireland is quite a new trend of Poles' mobility. Dynamic economic development in Ireland, shortage of well-skilled workers and low-skilled workforce were the main factors causing the inflow of foreign immigrants. Thus far Ireland had been a typical country of mass emigration because of historical, political, economic, and social reasons. That trend changed rapidly in the 1990s (Fig. 1). As a result of trade liberalization during the 1990s and the attractiveness of foreign direct investment, the Irish economy underwent a rapid growth, which induced many high-skilled emigrants to return (Mansoor, Quillin, 2006). Owing to their experience abroad, returning migrants were able to earn on average 10% more than similarly educated natives who had not moved (Barrett, O'Connell, 2000). Furthermore, thanks to its rapid economic growth, Ireland became a country of immigration that attracted high-skilled workers. The intensity of migration was growing dynamically in the following years mainly because of increasing number of migrants from Central and Eastern Europe (EU-8 since 2004 and Bulgaria and Romania since 2007).

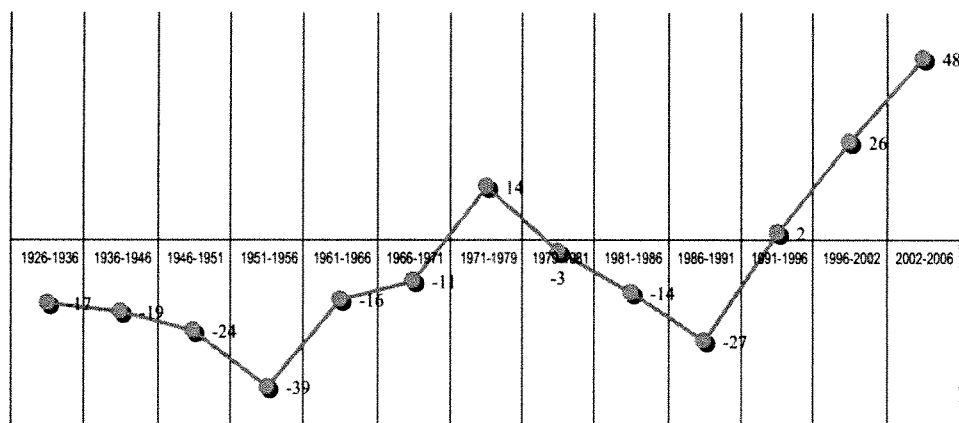


Fig. 1. Migration balance per 1,000 inhabitants in Ireland between 1926 and 2006

Source: Own evaluation based on Statistical Yearbook of Ireland 2009

Ireland has become a destination country for a new wave of immigrants. Official reports confirm an influx of over 300,000 immigrants from Eastern Europe, over 50% of them coming from Poland (Niehoff, Maciocha, 2008: 19–20). Immigrants primarily entered the Irish workforce through low wage jobs in the services, hospitality, construction, and other labour industries (Ledbetter, 2006). Ireland accepted the largest number of workers from EU-8 states, in relation to the total number of Irish population (Duszczuk, Wiśniewski, 2007: 7).

There is a basic difficulty with identification of exact number of Polish immigrants living and working in Ireland. The statistical and institutional discrepancies are very distinct. For instance, according to the Census of 2006 there were 63,276 Poles in Ireland. At the discretion of researchers and journalists statistical data are clearly underestimated. Other indicator of the scale of Polish migrations can be the quantity of Personal Public Service Numbers (PPS numbers) which were received by Polish immigrants. PPS number is a unique reference number that helps to gain access to social welfare benefits, public services and information in Ireland. The problem is that a simple analysis of those numbers is impossible because there is no obligation to resign from it, e.g., before the return to the home country. Nevertheless the sources of data presented above can be used in evaluation of approximate number of Polish immigrants in Ireland.

As previously mentioned, according to the last Irish Census the total number of Poles living in Ireland was approximately 63 thousand. Over 90% of Poles arrived to Ireland after 1st of May 2004 (in 2002 there were only 2,137 Polish people). Looking at demographic structures, the most important phenomena are: (a) domination of relatively young people (the average age is 27.5 years); (b) larger number of males (64%) than women (36%); (c) domination of

well-educated people (27% with completed high level and 58% with secondary level of education). The majority of Poles (84%) aged 15 years and over was working, mainly as employees. Such high percentage of working Polish migrants confirms that the wages are the main motivation of their mobility to Ireland. The dominating groups of Poles in the economic structure are low and semi-skilled workers (Fig. 2). There are only 3% of Polish workers who are employers and managers in Ireland, similarly to professionals – only 6%. It shows that Polish people find mainly low-paid jobs in the Irish labour market. The point is that proposed salaries are still much more attractive than in the Polish labour market.

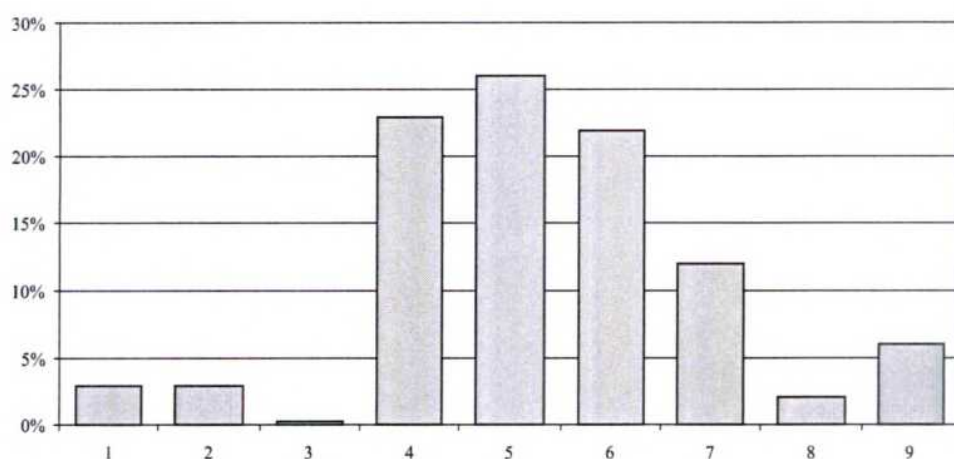


Fig. 2. Socio-economic groups of Poles working in the Irish labour market

Explanation: 1 – employers and managers; 2 – higher professional; 3 – lower professional; 4 – non-manual; 5 – manual skilled; 6 – semi-skilled; 7 – unskilled; 8 – own account, agricultural workers and farmers; 9 – others (including unknown)

Source: Own evaluation based on Census 2006. Non-Irish Nationals living in Ireland, 2008

The majority of males worked in construction and manufacturing and every second female worked in shops, hotels and restaurants. The predominant occupations included sales assistants (7%), building labourers (6%), cleaners and domestics (5%), and carpenters and joiners (4%) (Census 2006..., 2008: 30).

As it was previously mentioned, the dynamically increasing number of PPS numbers received by Polish immigrants shows the spectacular scale of Polish migration to Ireland, especially between 2004 and 2006 (Fig. 3).

Although figures on PPS numbers give an indication of inward migration, they do not show how many people have left the country since registering. Similarly,

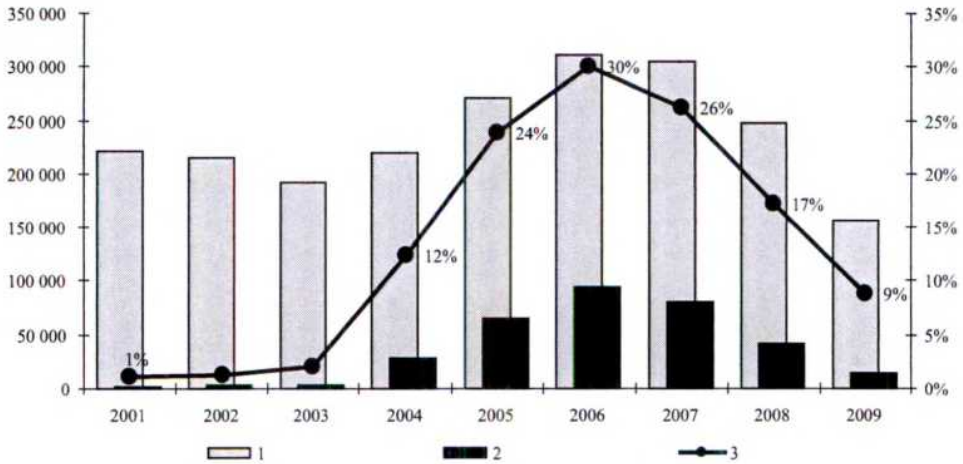


Fig. 3. PPS numbers issued in Ireland between 2001 and 2009

Explanation: 1 – total; 2 – Poland; 3 – in%

Source: Own evaluation based on data collected by Department of Social and Family Affairs, Dublin

they do not include migrants who chose not to register for a PPS number, or seasonal workers who re-activated numbers they held from previous stays (Cormaic, 2009). In spite of that, the analysis number of granted PPS number can be very helpful in the identification of scale and trends in migration. The current economic crisis, strongly experienced by Ireland, is reflected in declining numbers of newly registered people. For instance, whereas in 2006 almost 94,000 PPS numbers were issued to Polish nationals, who compose the largest migrant group in the Irish workforce, this quantity has declined to less than 14,000 in 2009 (see Fig. 3). As J. Wickham and T. Krings (2008: 1) notice, this appears to be linked to an improved labour market situation in Poland and to the fact that the pool of potential emigrants has diminished as many young Poles, the most mobile section of Polish society, have already left the country. However, it is also likely to reflect declining economic opportunities in Ireland, together with certain bettering of the condition of Polish economy.

Regardless of the statistical and institutional discrepancies it is obvious and undisputed that the relatively high wage rate is a powerful force inciting Polish migration. The point is why Ireland – the country which has never been attractive for Polish migrants before – is such a popular direction now. The opening of the labour market in 2004 was absolutely the crucial factor motivating Polish migrants. However the number of Poles' coming to Ireland was increasing until 2006–2007 in spite of opening of new labour markets of 'Old' Europe for new

members of the EU. Certainly there are some social and psychological reasons for this phenomenon observed among Polish migrants in Ireland. An attempt to identify those reasons is an important aim of author's research realized in Dublin in 2008.

POLISH MIGRANTS IN DUBLIN – SOME NOTES AND SURVEY RESULTS

The present study is an initial investigation into the motivation of Polish immigrants who have entered the Irish workplace and society. The field research took place in Greater Dublin area in September 2008. According to the data collected during the last Census (2006) Polish migrants were the biggest group (29%) of all coming to Ireland. The data were collected from a sample of 100 Polish immigrants. The focus of the study is not only an examination of the Poles' workplace experiences. Everyday life of Polish immigrants and their integration into Irish society as well as identification of 'Polish places' in urban space of Dublin are also research issues undertaken in the presented study.

A survey was developed and distributed by multiple methods to Polish immigrants. Respondents completed the survey of out hand, mostly at their workplaces. Another group of people took the inquiry form home and returned it the following day, while a few scanned the completed questionnaire and sent it by e-mail. A snowball method was applied to approach immigrants for the study. People who decided to take part in the survey, were asked if they knew of others who would be willing to participate. The sampling process resulted in the participation of 108 persons, but finally 100 correctly completed surveys were chosen for analysis.

The survey included information on demographics (e.g., gender, age, marital status, age, education, place of living in Poland), immigration information (e.g., when they immigrated to Ireland, how long they planned to stay, living arrangements), current employment or other engagements, use of Polish shops, services and other institutions, ways and places for leisure, etc.

Pararell to the survey described above, the author realized some interviews with Polish citizens. Their answers helped in formulation of some comments and supplements. Among the interlocutors there were for instance: a Polish priest working in one of the Catholic parishes in Dublin, a woman from Polish Information & Culture Centre in Dublin, PhD student from Poland – member of a project realized by Trinity Immigration Initiative in Dublin, an engineer hired in the construction sector and some people working in shops, restaurants and hotels.

Demographic characteristics of Polish ‘Dubliners’ taking part in research were as follows: (a) determined advantage of young people (78% under 30 years); (b) equal proportions of women and men; (c) visible majority (71%) of singles (37% unmarried men and 34% unmarried women); (d) high percentage of well-educated people (49% with higher and 47% with secondary level of education). For a vast majority of the migrants a job opportunity was the main reason of coming to Dublin. Over 90% of surveyed Poles said that it was the first motive for the decision on migration. Moreover 28% of respondents declared that learning English language was important to them. Some people indicated the education (8%) and tourism (4%) as the additional goals of their stay in Ireland.

It is underlined that in the case of Polish migration to Dublin social networks played the main role (Fig. 4). 40% of respondents came there directly to friends who had come there before, while the next 22% arrived there to cohabitants or spouses and 15% to other family members. Only a quarter of Poles said that they moved to Dublin on spec, not having any contacts with the local people beforehand. It means that people having closer relations decide on mobility much more easily, because they feel more safe and self-confident. Moreover they usually can stay with friends or family and count on their basic support.

Duration of a job-seeking period in Ireland was found to be absolutely shorter than in Poland, especially between 2004 and 2006. Additionally, average wages in Irish labour market were much higher than Polish ones. Those factors were

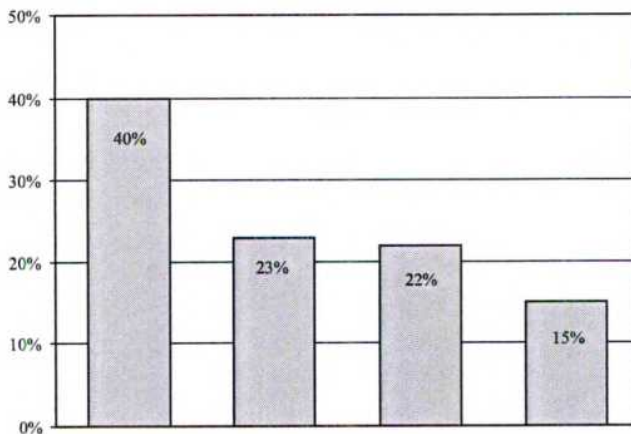


Fig. 4. The role of social networks in Polish migration to Dublin

Explanation: 1 – arrival to friends; 2 – arrival on spec; 3 – arrival to partner; 4 – arrival to family

Source: Own evaluation based on results of author's research

crucial for the decision to migrate. Among 90% of Polish migrants who came to Dublin to work, 12 on spec had signed contracts before and over 75 on spec were looking for a job for less than one month.

On the other hand the majority of Polish employed has a job below their qualifications. Polish immigrants often underline that it is quite easy to find a job but then it is much more difficult to be promoted, even despite the employer's satisfaction. Irish employers perceive Polish workers as well-educated and high-skilled workers and professionals. It seems that the crucial factor deciding on the position on the labour market and prospects of promotion in work is the level of knowledge of English language. The results and findings of studies on Polish migration in Ireland affirm this thesis. K. Kropiwiec and R. Chiyoko King-O'Riain (2006) note that 'insufficient knowledge of English is the main problem of Polish society in Ireland and prevalent reason of social (auto) isolation'. Also A. Barrett et al. (2006) underline the close connections between knowledge of language and chances on the local labour market: 'this is of particular importance as migrants in Ireland are often employed below their qualifications which can partially be attributed to a lack of language proficiency'. In turn A. Bobek et al. (2008) affirm that 'while a good command of English may not be required for an entry position in technical occupations, it can however play an important role when progressing with the career'. Summing up, the good knowledge of English is for Polish migrants doubly important: firstly as the factor giving the valuable advantage in the moment of choosing a job and secondly as a strong reason for promotion.

The costs of living in Ireland – especially in Dublin – are quite high comparing with other European capitals. This is an important problem for Polish migrants who think not only about good living there but – maybe much more intensively – about earning money for a wealthy life back in Poland in future. That is why Poles try to find relatively cheap places for living. According to the Census of 2006 nearly 93% of Poles lived in rented accommodation. It was the highest percentage for any ethnic group. The results of author's research performed in Dublin affirm statistical proportions (Fig. 5).

About 60% of respondents live with people they are not related to. It means that for them lower rent and costs of living are definitely more important than the housing or residential quality. On the other hand it can amount that the Polish migration is temporary and immigrants plan to return to Poland in indefinite future. Only 2% of Polish people declare that they live in a flat of their own. It is a very spectacular indicator which confirms observations described above: mainly too high prices on the housing market for Poles and temporary stay in Dublin/Ireland.

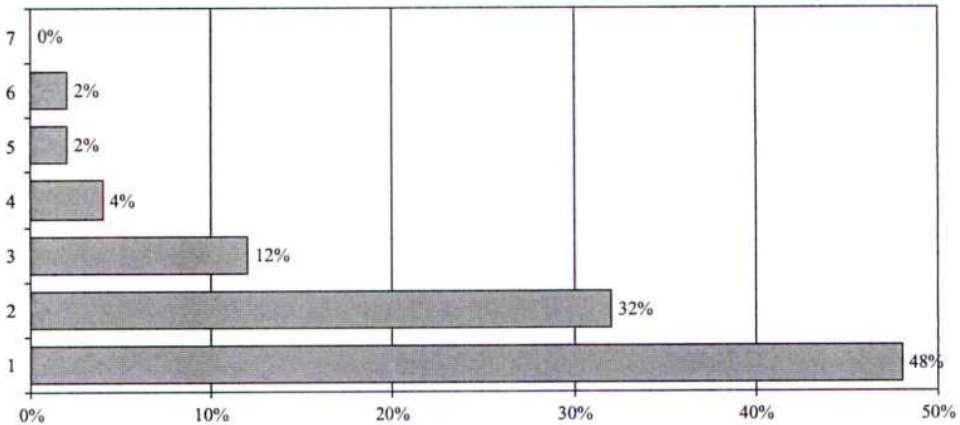


Fig. 5. Polish immigrants' places of living in Dublin

Explanation: 1 – with friends in rented flat; 2 – with family in rented flat; 3 – with Poles who have not know before; 4 – alone in rented flat; 5 – in rented room at Irish home; 6 – with family in own flat; 7 – alone in own flat

Source: Own evaluation based on results of author's research

POLES AND POLISH PLACES IN URBAN SPACE OF DUBLIN

There are two main clusters of Polish immigrants in Greater Dublin Area: City Centre of Dublin (D1 and D2 districts) and in South Dublin County (D24 district) with Tallaght as the largest urban centre. The variety of Poles' opinions about the most favourite places of living and leisure for Polish immigrants in indicated districts of Greater Dublin is presented below (Table 3). The choice of Central districts of Dublin for a place of living results from the better accessibility to workplaces and and/or to bus/tram/train services. In turn the concentration of Polish immigrants in Tallaght is a result of lower renting prices of flats and good

Table 3. Main clusters of Polish immigrants in the urban space of Great Dublin

	A	B
Location of place of living	24%	13%
Most popular districts for living for Poles	25%	24%
Concentration of Polish shops and services	92%	3%
Places of frequent presence of Poles	52%	5%
Favourite places of leisure	42%	8%

Explanation: A – City Centre; B – Tallaght

Source: Own evaluation based on results of author's research

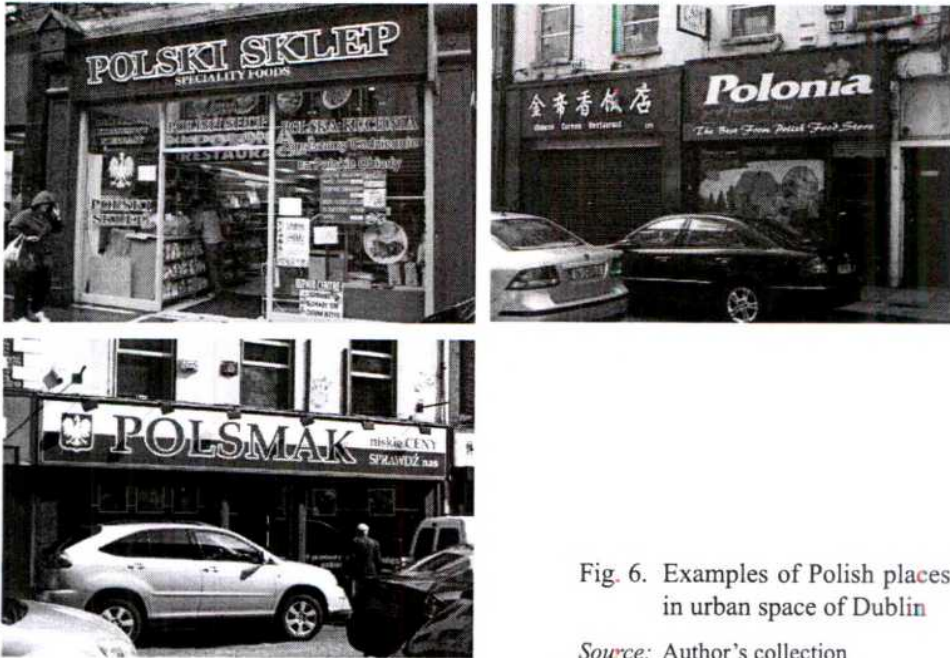


Fig. 6. Examples of Polish places in urban space of Dublin

Source: Author's collection

connections with the city centre by tram LUAS. Increasing number of Polish shops and services was the consequence of the significant number of Poles living and working there.

Among numerous Polish institutions, shops, services, and media the most attractive for Polish migrants are the Polish shops (Fig. 6) and the Polish Catholic Church. According to author's research results almost 90% of all respondents declare that they do their shopping in Polish shops. About 60% of Polish immigrants regularly (once a week) attend the Polish church in Dublin (Lisak, 2008).

The presence of Polish places in urban space of Dublin is very visible. The quantity of Polish institutions and their activity in real and virtual space is really spectacular and shows that Polish immigrants occupy significant and relevant spaces and places in urban and social sphere. It is very interesting that Polish people demonstrate their presence in Dublin and in other Irish cities using Polish national colours, emblems and other typical Polish symbols. It means that Poles feel safely and are an accepted ethnic group in a multicultural city. The network of Polish shops and services is well organized and accessible. Analysis of the network of Polish public places (in the real and virtual sense) allows to claim that Polish immigrants are socially engaged, friendly and helpful for their countrymen. It may be the result of 'the ride in the same boat' and understanding the situation of a typical migrant.

CONCLUSIONS

Republic of Ireland is one of the most popular destination countries chosen by Polish migrants after 1st May of 2004, mainly thanks to the opening the Irish labour market for new members of the EU. In the structure of Polish migration Ireland became an important destination along with traditional receiving countries, like Germany, Great Britain and the USA. Compared to other sending countries from Eastern Europe, definitely the force of wave Polish immigrants is the biggest. Although the scale of the Polish migration to Ireland is certainly massive, there are fundamental difficulties with evaluation of number of Polish migrants in Ireland. There is a distinct discord between census data and estimates of researchers, public and private institutions or media. One of the reasons of problems with estimation is the substantial alternation and fluctuation of migrants in Ireland. Moreover the consecutive issue complicating the accurate evaluation of quantity of Polish minority in Ireland is the discussion on the scale of return migration. It is especially difficult to quantify because migrants' declarations and final decisions are sometimes extremely different. Poles often declare that will come back their home country soon, but on the other hand they underline the lack of prospects after their eventual return to Poland. The economic crisis in Ireland which had started in 2008 became the further complicated identification of the scale of migrations from Poland. It seems that case studies implemented in smaller groups of migrants or in concrete spaces occupied by them are an important research method facilitating the explanation of phenomenon of Polish migration to Ireland.

The presented case study is an attempt to identify Polish immigrants living in Dublin. Work appears to be the dominant reason of their decision to migrate to Ireland. Statistically they are relatively young, mainly single and well-educated. They are relatively satisfied with living in Ireland, which seems to be easier and more comfortable. The city centre of Dublin is the main area of Poles' absorption, mainly because of the workplaces concentrated there. Moreover there are numerous Polish institutions, shops and services located in the vicinity. Finally, the city centre is the most popular place for leisure, shopping and clubbing not only for Irish but for Polish people as well. A very interesting and specific aspect of Polish migration in Dublin and other Irish cities and towns is the demonstration of Polish presence in urban spaces by using Polish names, symbols, state emblems and colours, etc. Such 'visualization' is characteristic of the new wave of Polish migration after the EU enlargement. It means that Poles do not have typical Polish complexes ('poor and worse') and feel safe in Ireland. On the other hand, the Irish society accepts Polish minority and in general perceives them positively.

Polish economic and social activity is visible both in urban and in virtual space. The networks created by the Polish migrants in virtual world are a good example of integration of Polish Diaspora in Dublin and whole Ireland.

The substantial scale of the Polish migration to Ireland and serious problems with evaluation of this phenomenon commented in the paper are the ultimate reason for continuation of research. The diversity of issues and problems observed among Polish immigrants legitimizes the necessity for interdisciplinary studies on economic, demographic, social, legal, cultural, and political aspects of Polish migration to Ireland.

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POPULATION OF AMERICAN CITIES: 1950–2009

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ABSTRACT. Contrary to the industrial epoch, cities have been interpreted in the last fifty years as the places facing the greatest economic and social problems. A contrasting view has emerged only recently that takes cities as sites of economic dynamism and social vitality. The paper offers evidence on population change for 118 greatest cities of the United States of America to assess how their fortunes have changed from the 1950s to 2009. Considerable diversity of experience was revealed and seven categories of cities have been distinguished as far as their population change patterns are concerned. These categories range from the continuous growth from 1950 until today to continuous decline. The most dynamic cities are located in the Sun Belt and they are relatively small and new.

On the opposite, the biggest and old industrial centres of the Rust Belt have been losing inhabitants. In general, the pattern of population change shows close relationship with the economic situation and in particular, is connected with the structural changes in society and economy, namely the structural shifts toward more services-oriented economy, and smaller households.

Essentially the paper offers the historical outline of the population changes in the biggest American urban centres. It should be seen as an introduction necessary for the more advanced studies concerning the issues of employment, incomes, ethnic composition, and various social problems which could explain the changing fortunes of particular cities.

KEY WORDS: USA, cities, population change.

INTRODUCTION

The development of American urban system is closely connected with two general processes. Firstly, the process of colonization of the territory, which had been completed before the end of the 19th century. Secondly, the industrialization process, the main stage of which fell also in the 19th century. Manufacturing

showed to be the main cause of the appearance of the greatest concentrations of population. And it was mainly due to industrial expansion that just one hundred years ago no less than a half of the American pioneer society lived in cities. From that time the US population was enlarged 2.5 times and the urbanization coefficient reached 80%. It means that the population of American cities has grown more than 5 times. It should be noted that the urban expansion was hampered neither by the Great Economic Crisis nor by the Second World War. Only in 1950s, that is to say after the great historical disasters, when the US population was growing and its further development was expected, several American cities started to decline. Simultaneously there appeared numerous new, highly dynamic urban centres. So, the US urban system have become more differentiated and now it consists of various categories of cities with different geographical and functional characteristics, and with different tendencies as far as population changes are concerned (Berry, Horton, 1970). The aim of this study is to show main trajectories of American cities' population. The paper offers evidence on population change for 118 cities which reached the number of 200,000 inhabitants across the United States of America to assess how their fortunes have changed over the period from the 1950s through to 2009.

CITIES IN GEOGRAPHICAL PERSPECTIVE

The social and economic interpretation of cities in geographical research have been changing over time. During the first half of the 20th century the assessments typical for the industrial period prevailed. Cities were seen as the greatest concentrations of economic activities and the centres of progress, contrary to rural districts, which were conservative and devoid of industrial enterprises (Wirth, 1938). This stereotype in America was strengthened by the traditional antagonism between the agricultural and conservative South, and the modernist, liberal and industrialized North. This mode of thinking was also very strong in Europe, and particularly in the post-war Poland, where the state propaganda tried to show the traditional peasantry with its private property rights, as an obstacle on the way of the so-called social progress, the leading role in which was to be played by industrial proletariat. During this period the growing urbanization coefficients were registered with optimism, as the evidence of the so-called progress. In spite of the fact in some cities there appeared problems connected with the excessive concentration and congestion (e.g., London in 1930s). Mainly due to these problems, in the second half of the 20th century there in urban geography were quite different atmosphere. Cities were identified as the

places facing the greatest economic and social difficulties. Deindustrialization and deconcentration of jobs put strains on urban communities (Hall, 1999). Some researchers interpreted cities as remnants of industrial era when transport costs were high, supply chains were local and people preferred to live close to their workplaces. For several years cities have been identified again as sites of economic dynamism and engines of prosperity. It is explained by the circumstances of a post-industrial world of low transport costs and the people's and firms' strive after locations where property is cheaper, congestion lower, and environmental quality higher (Berry, 1973; Pascal, 1987; Garreau, 1991). Trying to explain this shift in orientation of researchers, Turok and Mykhnenko (2007) emphasized the role of cities as sources of innovation and productivity growth in advanced economy based on high order business services, logistics, research-intensive universities, and the direct cooperation and competition of firms. Cities contain the necessary social infrastructure to attract the most skilled and creative groups of population (Glaeser, Gottlieb, 2006; Cheshire, 2006; Szymańska, 2007). If in the previous period the key notions in urban geographical literature were deglomeration and crisis, nowadays they have been replaced by the 'resurgence' of cities, which after the period of decline started to grow again. This process is particularly evident in the United States, where it is explained by the general shift in the industrial structure from manufacturing to services. Services are thought to have a stronger urban orientation than manufacturing. Also there are some demographic trends that favour city locations (reduction in number of households with one breadwinner, who were bound to favour the suburbs, growing number of single adults households, couples with no children, and families with two or more people in work).

American cities were growing permanently from their very beginnings to 1950s. Then there was the period of deglomeration and crisis, during which numerous cities declined. These tendencies were changed some 15–20 years ago with the resurgence impulse (Quigley, 1998; Florida, 2004; Storper, Manville, 2006). In 1980s there were identified three groups of cities in the USA. To the first one the industrial centres of the North (Midwestern and Middle Atlantic Regions) were included, which experienced depopulation after 1950. The second group consists of regional centres of the whole territory, located along the main national communication routes. They are mostly cities established in the second half of the 19th century and their growth was steadily hampered during the second half of the 20th century. To the third group were included quickly growing cities of the South and West with the differentiated functional structure. Their main period of growth falls on the second half of 20th century and some of them were established just after the Second World War (Wilczyński, 1988). This model was

very popular among scientists and became the basis for long-term predictions. Extrapolation of trends which were registered during 1950s, 1960s, and 1970s allowed the National Planning Association to announce the forecast in 1980, according to which the greatest American city by the year 2000 was to be Los Angeles with some 8.8 mln inhabitants, and on the outskirts of New York were to appear new urban centres with population of more than 1 million each, namely Nassau-Suffolk (Long Island) and Middlesex City (New Jersey). The model of the three categories of cities in the USA showed to be insufficient, however, and the NPA predictions failed to take into account the resurgence effect. This phenomenon was also ignored in the Polish geographical literature. In 1999, that is to say, years after the resurgence process passed its apogee, there appeared interesting, mainly sociological study by A. Majer. Analyses made by the author concern, however, the depopulation in cities and the crisis, which was to be prevented by way of the changes in federal and state policy (Majer, 1999). In this situation the research projects concerning the population changes of American cities seem to be justified and necessary. Changes in population of cities are the result of intermingled demographic, economic, socio-cultural, political, and natural factors which influence people's own decisions and their spatial behaviour. Geographical studies concerning the population changes in cities could then lead to explanation and assessment of particular factors influencing the distribution of population, leading to better understanding of changes in geographical realities of particular regions.

AGGREGATE PATTERNS OF CHANGE

The study covers all 118 cities in the United States, which during the period 1950–2009 reached the level of 200,000 inhabitants (see Fig. 1). These cities account for 20% of the total US population (62.5 mln people in 2009). This proportion was reduced from 24.1% in 1950 to 19.0% in 1990, and then started to grow slowly. There is a big diversity among the cities included in the study. There are eight cities whose population numbers are below the level of 200,000 due to the recent decline (Yonkers, Richmond, Mobile, Des Moines, Jackson, Worcester, Dayton, and the smallest Syracuse with only 137,000 inhabitants). On the other hand, there are quickly growing cities, which exist no more than 30–40 years (Moreno Valley, Spring Valley, Irvine, and Gilbert). This diversity is connected with the age of cities but also is expressed in their demographic and economic structures, as well as in their social conditions. Moreover this diversity is reflected in the directions and dynamics of population change.

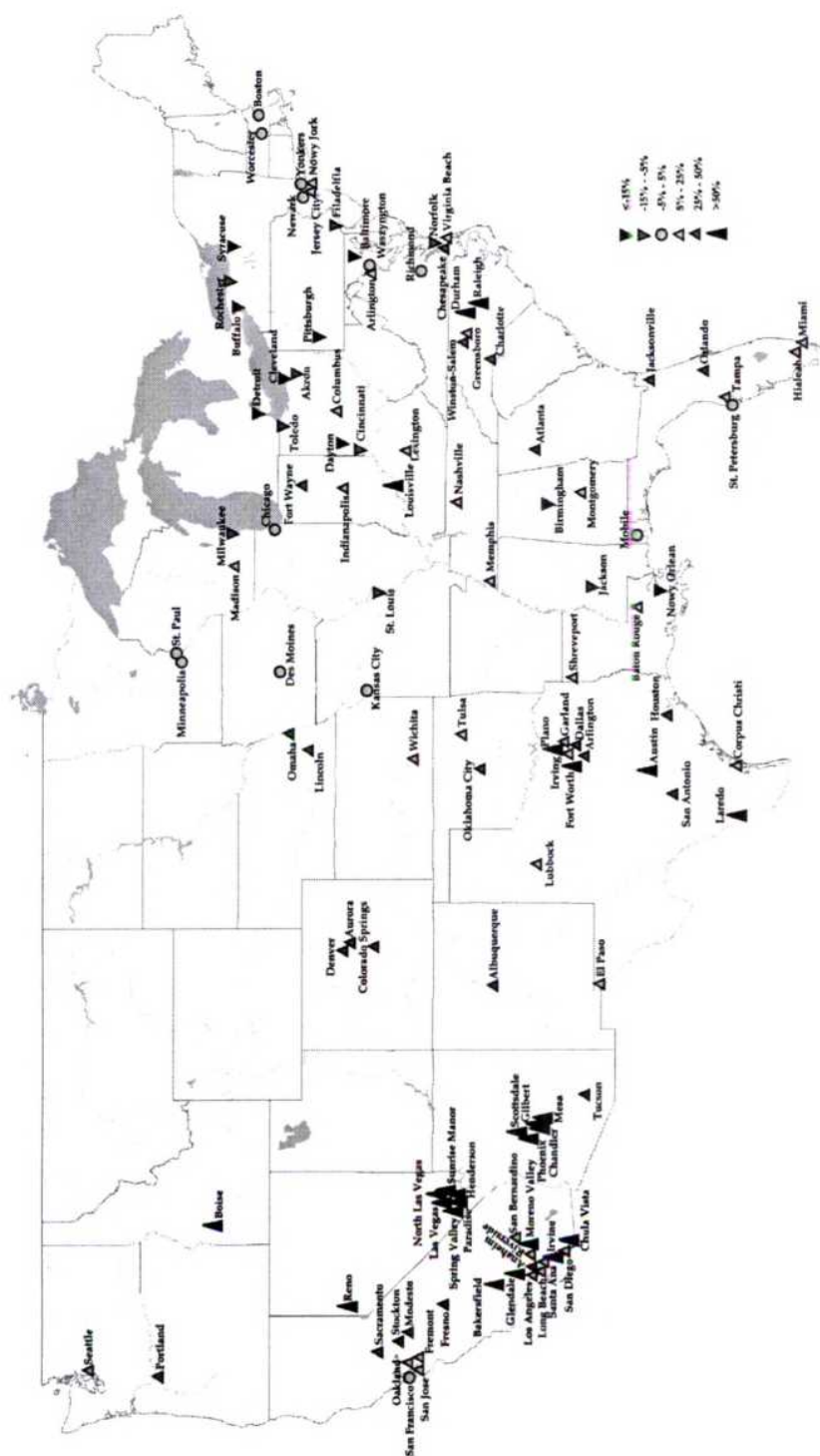


Fig. 1. American cities with population exceeding 200,000 in 2009 and their recent population changes in cities included in the study (during 1990-2009)

Source: Authors' elaboration based on the U.S. Census Bureau, 2009

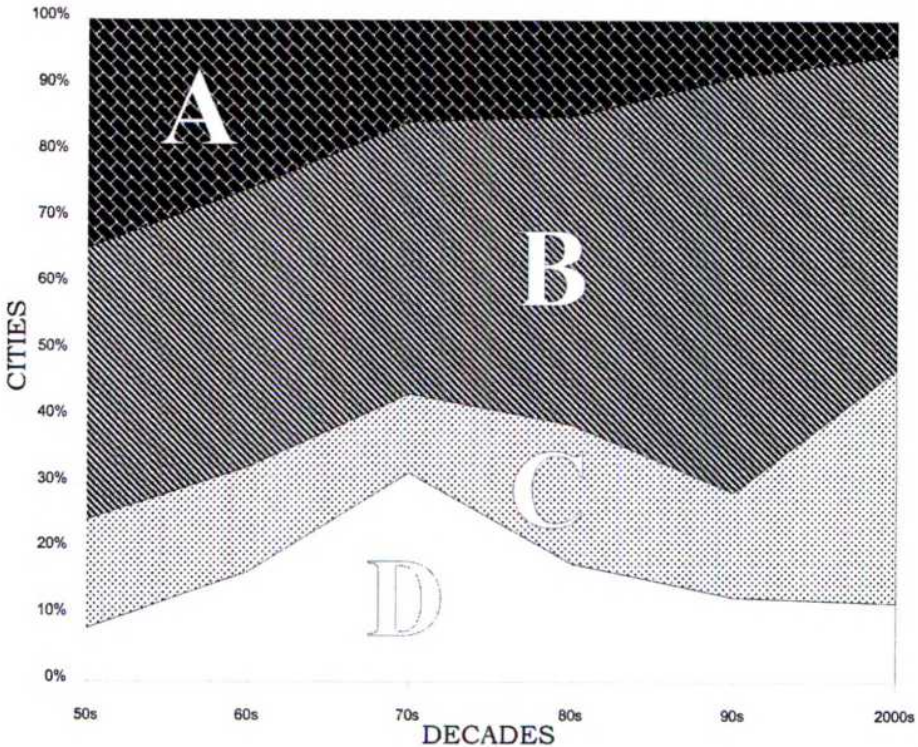


Fig. 2. Proportions of cities that were quickly growing (A), moderately growing (B), stable (C), and declining (D) in decades

Source: Authors' elaboration based on the U.S. Census Bureau, 2009

During the whole studied period the population numbers in the most of cities were rising. In the most successful decades of 1950s and 1990s more than 70% of cities experienced population growth. Among the group of growing centres, there is a considerable number of cities with the growth rate of more than 50% per decade. They consisted 35% of the total number in 1950s, but this proportion has been constantly reduced to the level of 7%. The most numerous through the whole period was the group of cities with a moderate growth rate of 5–50% per decade. In 1990s to this group belonged more than 60% of the studied cities. Some 10–20% of the cities experienced insignificant changes of population numbers (no more than 5% per decade). However, the number of such cities with relatively stable population numbers has grown strongly after the year 2000 exceeding the level of 30%. The remaining 10–15% of American cities have experienced population decline of no less than 5% per decade. During 1970s

this group accounted for more than 30% of the total number of cities. Population changes in American cities show the period of regression from the beginning of the study period until 1980s when the numbers of declining cities were rising and the numbers of growing cities were falling. Then the recovery (or resurgence) period has begun, when the number of moderately growing cities was rising at the cost of all remaining categories of cities. During the decade of 2000–2009 the numbers of cities in all categories have fallen, except the group of cities with insignificant population changes. The number of those cities was increased twofold (see Fig. 2).

Changes in population of cities are indicators of their prosperity, if they can not be explained by the natural increase. The US population growth rate has been falling from 18.5% per decade in 1950s to 8.72% in the last decade (Table 1). Changes in the population of American cities during the first two decades can be satisfactorily explained by the national demographic trend (reduction in the growth rates by 5 percentage points in both the total population and the population of cities). The turning point was the decade of 1970s, when the total population growth rate was slightly smaller than in the previous decade, however, the population of cities experienced decline in absolute terms. During the next decades the population of cities started to grow faster in comparison to the total population. It can be explained by the rising fortunes of cities and their growing importance in the national economy after 1980 (see Fig. 3, 4, 5, 6, 7, 8). The data used for the analysis are for the city proper according to the statistics offered by the United States Bureau of the Census. With few exceptions the studied cities are incorporated places. Five of them (Jackson, Jacksonville, Lexington, Louisville, and Nashville) are parts of consolidated city – county governments. Populations of other incorporated places in the county have been excluded from the population totals taken into analysis. For years that predate the establishment of a consolidated city – county government city population is shown. Another exception is Arlington, VA which is the so-called census designated place (CDP). Although not incorporated CDP's are recognized as statistical equivalents for census purposes.

Table 1. Average national and city population growth rates (% in decades)

	1950s	1960s	1970s	1980s	1990s	2000–2009
USA total	18.51	13.32	11.48	9.78	13.15	8.72
Cities only	12.48	7.21	–0.26	7.95	15.20	14.49

Source: Authors' calculations based on the Decennial Censuses and Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

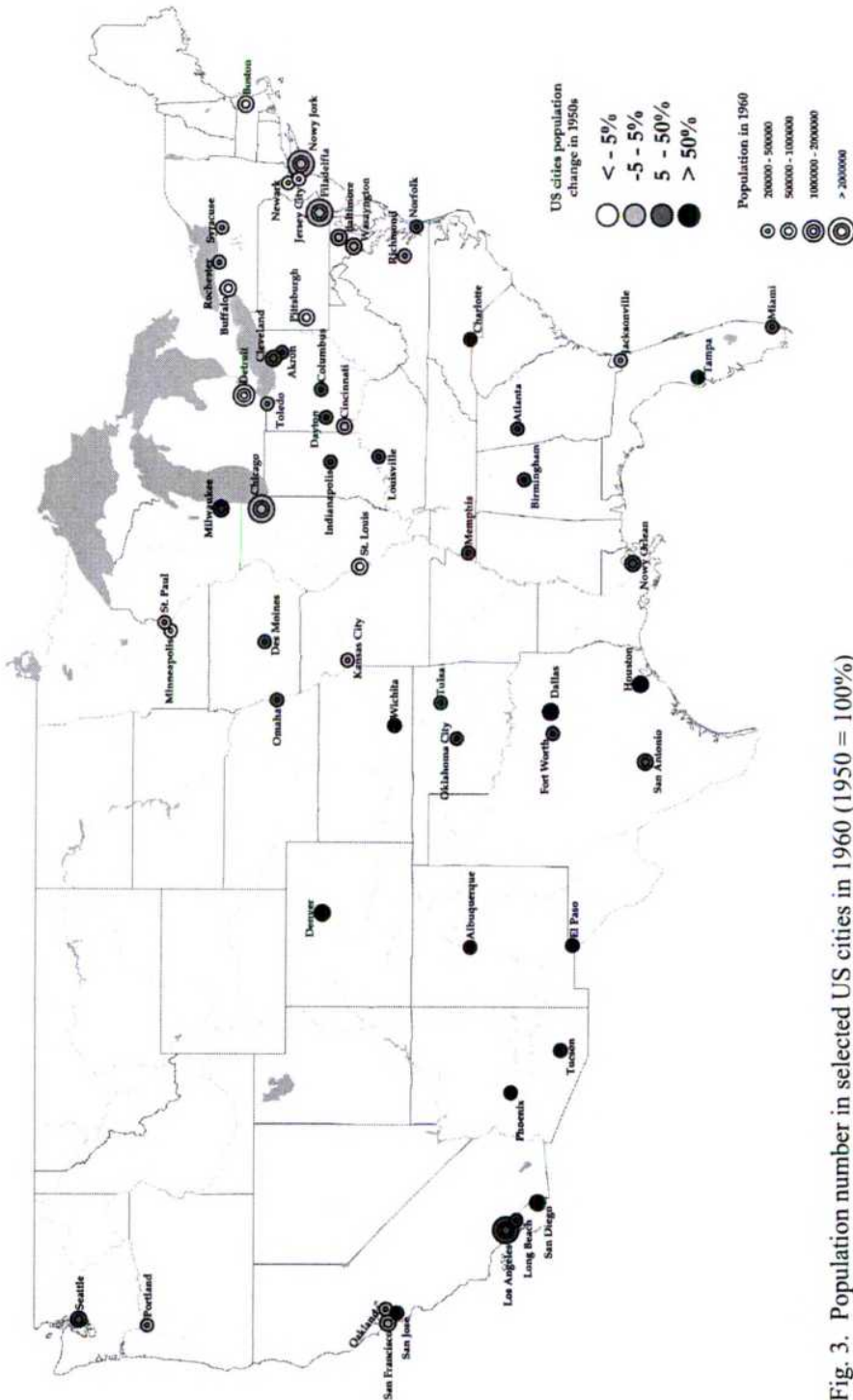


Fig. 3. Population number in selected US cities in 1960 (1950 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009



Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

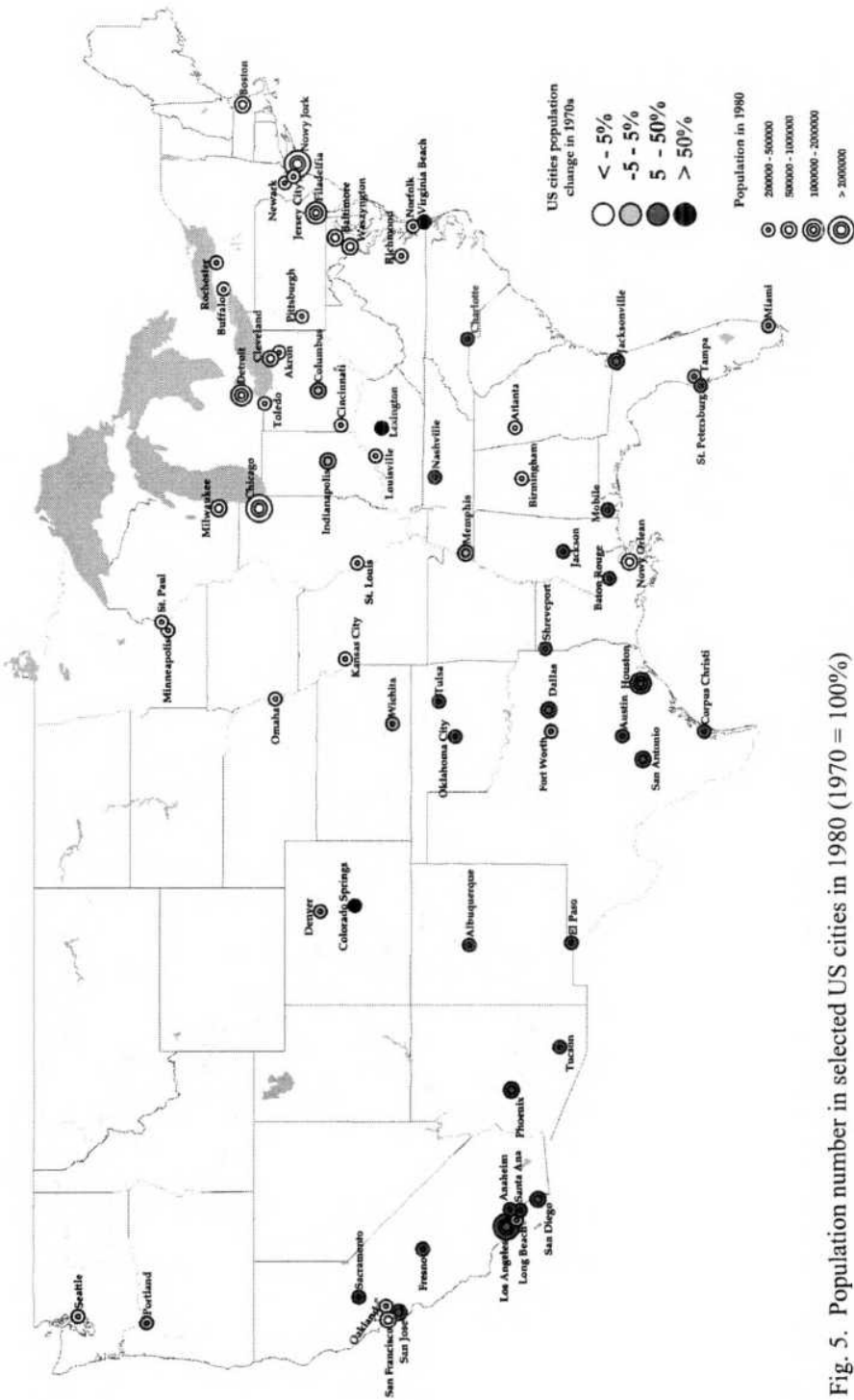


Fig. 5. Population number in selected US cities in 1980 (1970 = 100%)
 Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

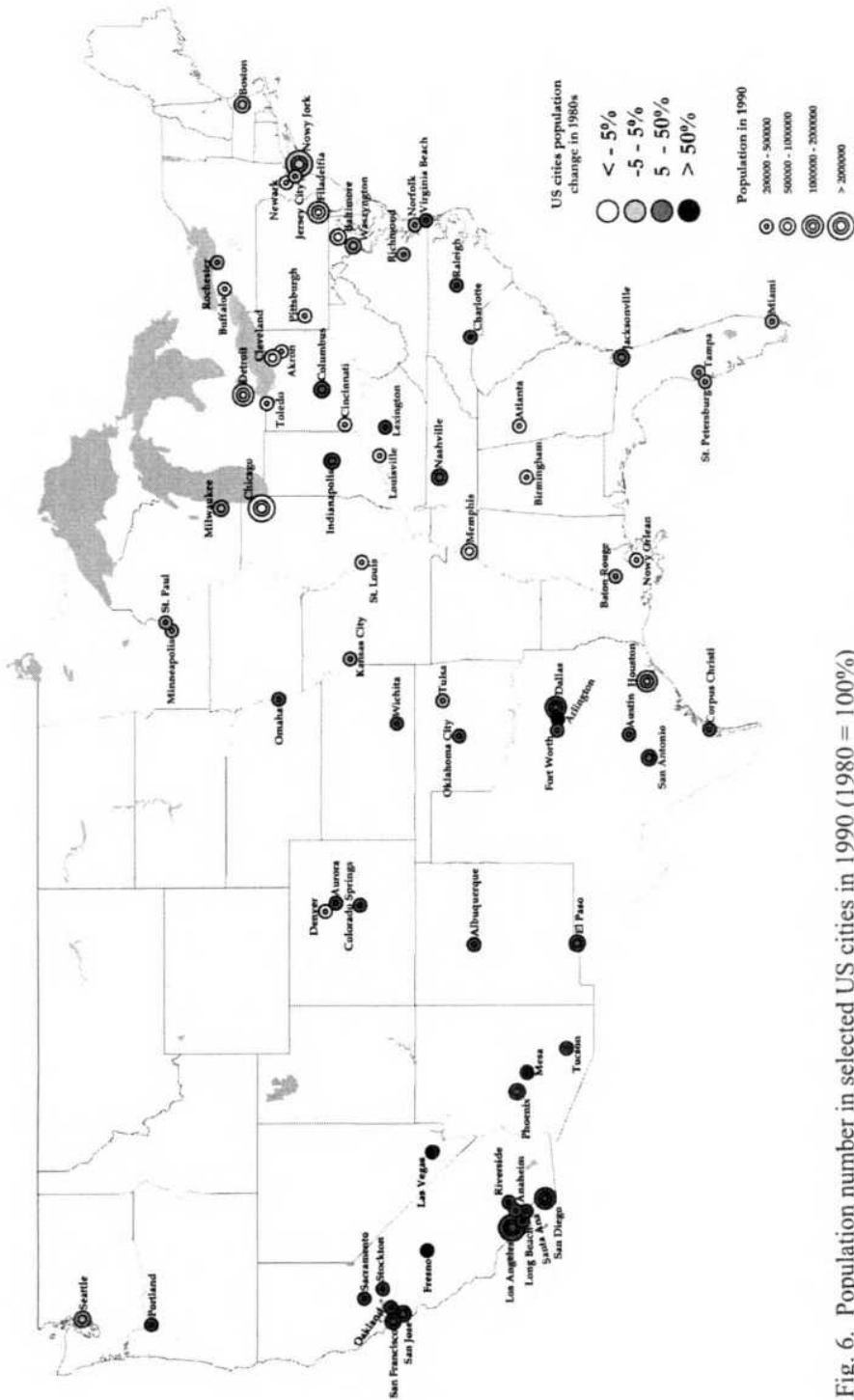
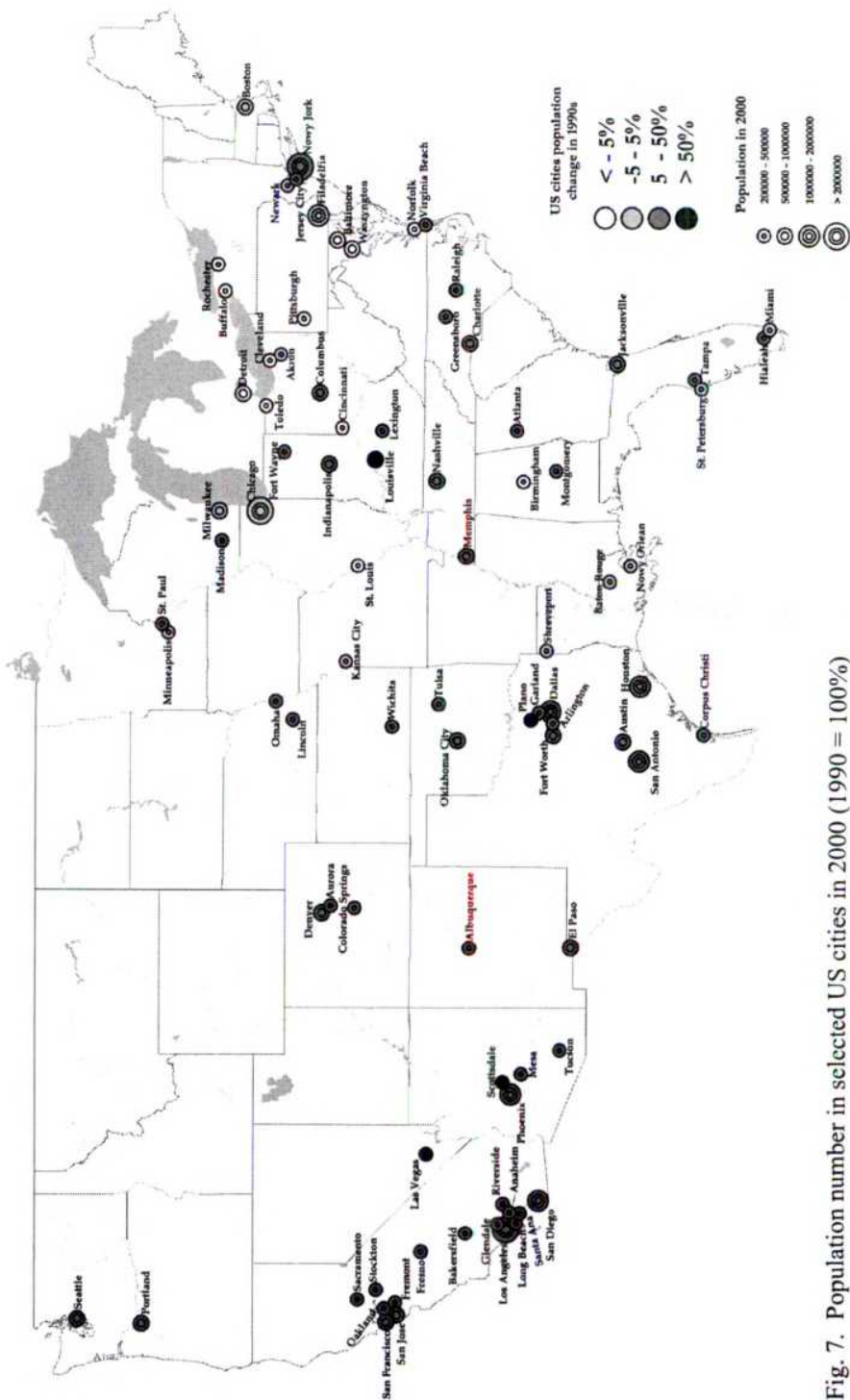


Fig. 6. Population number in selected US cities in 1990 (1980 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009



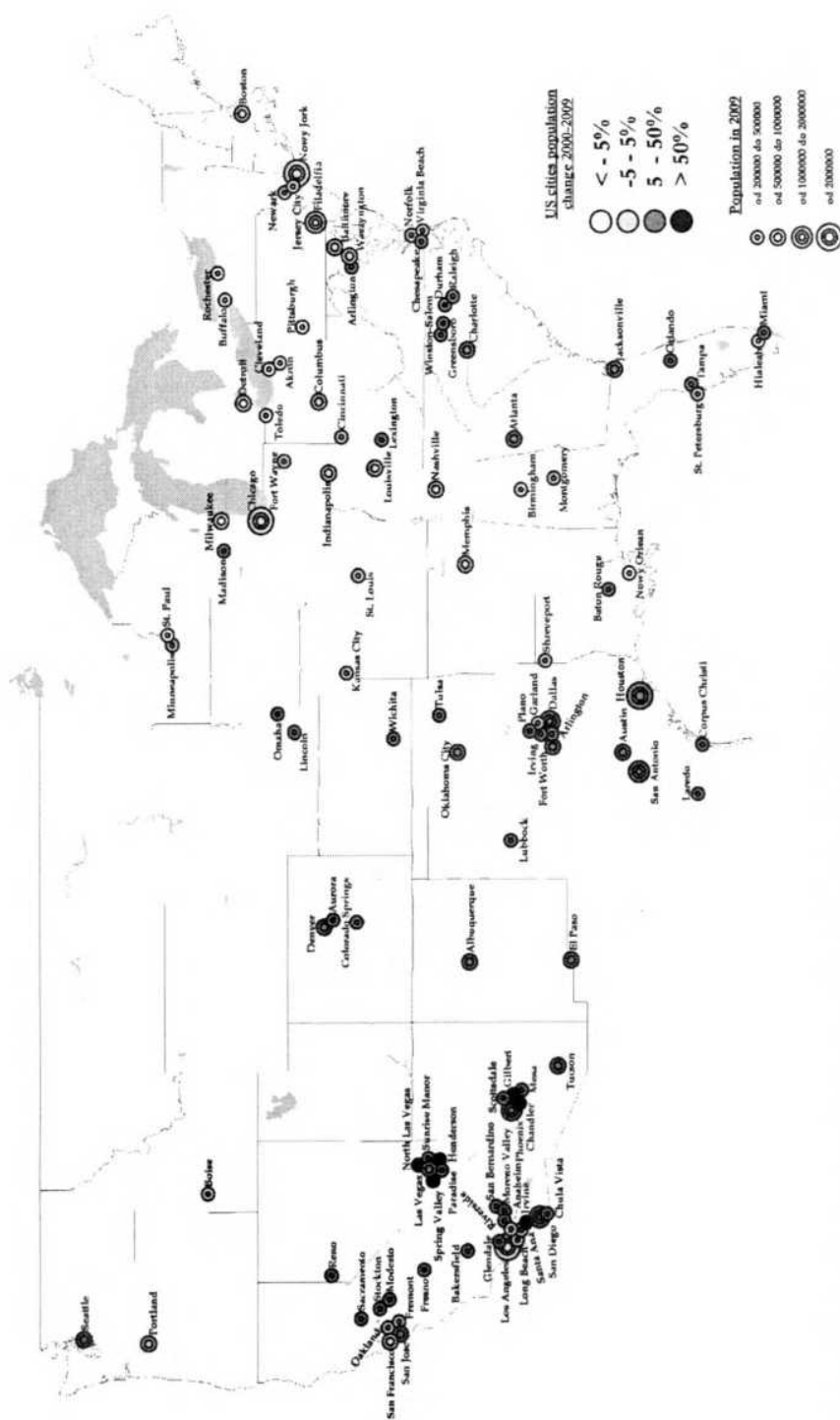


Fig. 8. Population number in selected US cities in 2009 (2000 = 100%)

Source: Authors' elaboration based on the Decennial Censuses and the Population Estimates Program, U.S. Bureau of the Census, U.S. Department of Commerce, 2009

DIFFERENT TRAJECTORIES OF CITIES

The aggregate pattern of change constitutes the context and conceptual basis for exploring the extent of diversity among cities and examining their different trajectories. On the basis of population changes in cities in successive decades, the seven most common trajectories of change were distinguished and all cities were divided into seven categories (Fig. 9). The categories are mutually

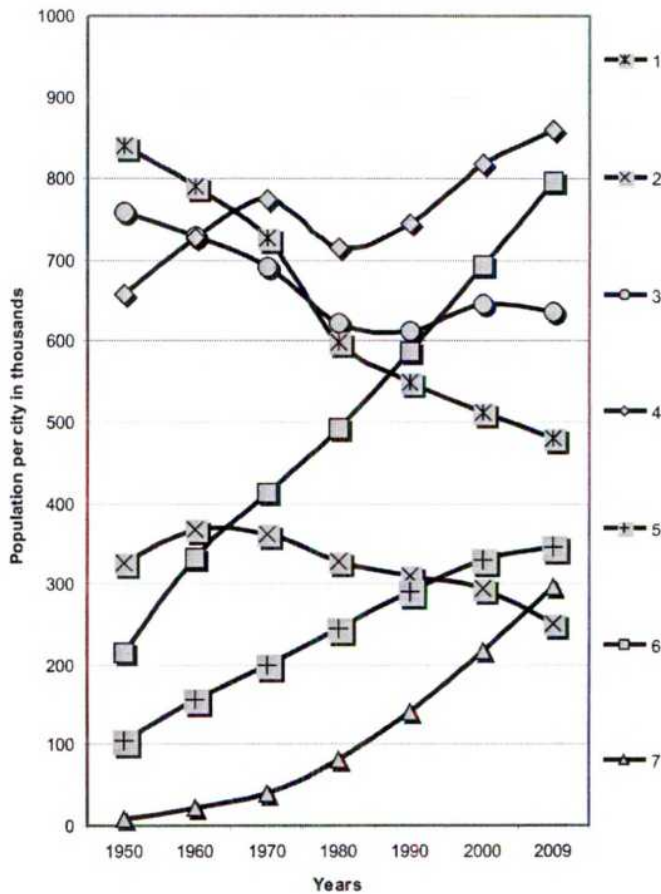


Fig. 9. Trajectories of population change in seven categories of American cities by decades

Explanation: 1 – continuous decline; 2 – long-term decline; 3 – resurgence; 4 – disturbed growth; 5 – slow growth; 6 – moderate growth; 7 – fast growth

Source: Authors' calculations based on the Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

exclusive and are distinguished by the direction and rate of change between different points in time. The trajectories range from continuous decline over the last 60 years to continuous growth. They are as follows: a) continuous decline (12 big industrial centres of the Rust Belt); b) long-term decline from 1960 or 1970 (9 old centres east of Mississippi); c) decline followed by the resurgence effect after 1980 or 1990 (10 dispersed cities); d) growth disturbed by crisis in 1970s, or also in 1980s (18 dispersed cities); e) continuous slow growth and stabilization (24 cities of South and West); f) continuous growth (23 cities of South and West); g) continuous fast growth (17 relatively small and young cities west of Louisiana).

The vast majority of the 118 cities followed one of the seven trajectories. Only 5 cities were excluded from the classification due to changes in the administrative boundaries during the study period, namely Jackson, Jacksonville, Lexington, Louisville, and Nashville (Fig. 10). They are now parts of the consolidated city – county governments and population data for the proper city are not available. Fig. 9 and 10 confirm considerable diversity of experience among cities. The most common profile, followed by 40 cities, is continuous growth (32%). When 24 growing cities with the slowing tendency are added, there appears the group of 60 cities, that is to say 51%. All these cities are located in the regions of the South and West.

Another large group have had the long-term downturn since 1950s or 1960s. These are 21 cities located east of Mississippi, and mainly on the borders of industrial Heartland. The remaining cities followed more complicated and volatile patterns of change. The important observation is that regional distinctions seem to matter. There appears the big difference between cities in the eastern part (belonging to the first two categories) and the cities of the Sun Belt (included mostly in the last three categories). Moreover, an analysis of the Fig. 3–10 allows us to formulate the suggestion according to which the city size has been an important factor influencing the growth rates of cities. It shows to be evident that larger cities have tended to grow more slowly than the smaller ones. In their study concerning European cities, Turok and Mykhnenko argue that this is because of congestion and high property prices (2007). Moreover, it is easier for a small city to reach a level, e.g., a one per cent per year expansion than for a large city because its perimeter is proportionately larger in relation to its built-up area. Such explanation seems to be reasonable also for American cities since there is the strong negative relationship between city size and growth rate for the period 1990–2009 (Fig. 11). This is in contrast with some new urban theories which suggest that big cities are now better placed than smaller settlements because of the larger scale of opportunities, amenities, infrastructure, and skills available to firms and people (Buck et al., 2005). There has appeared a shift in American

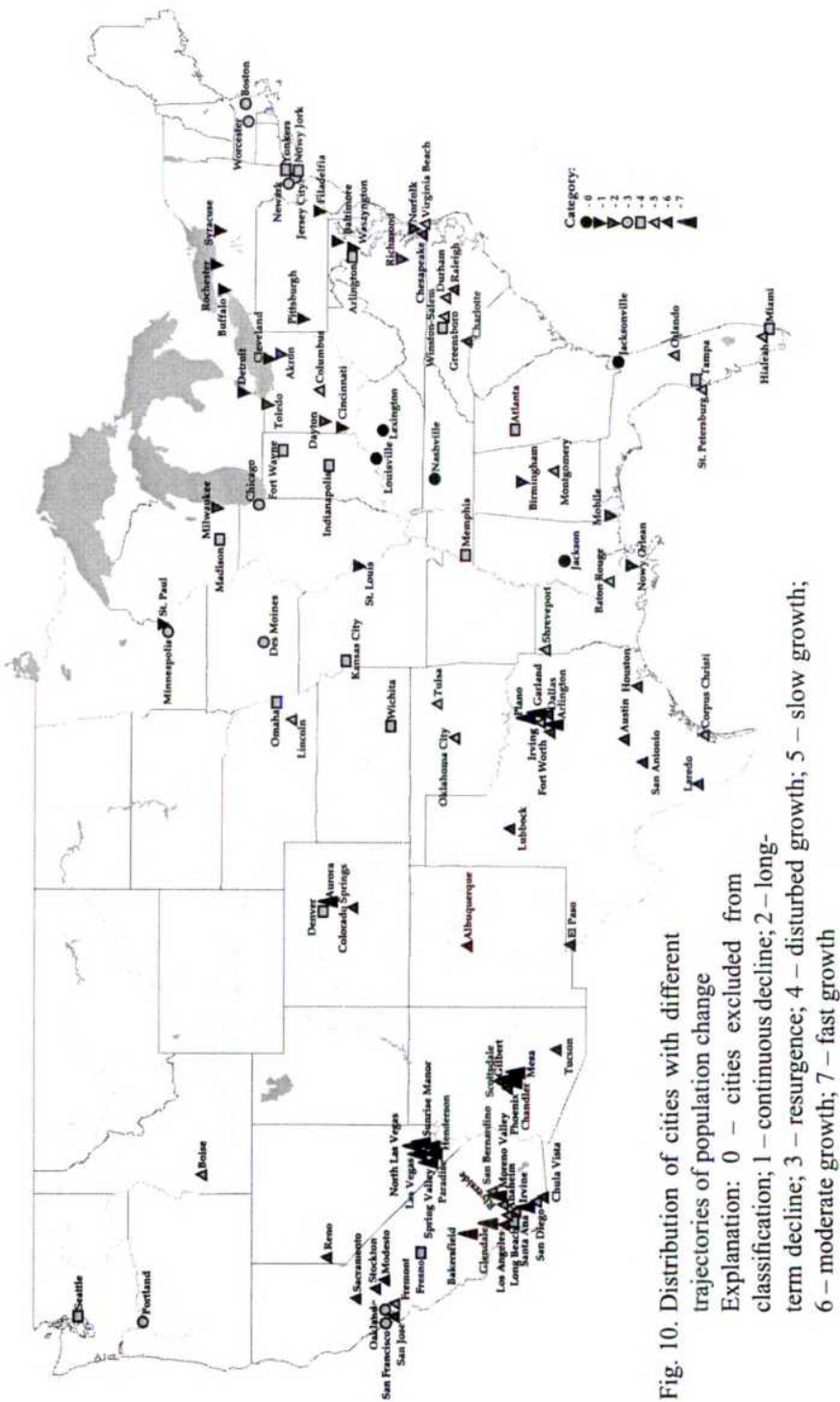


Fig. 10. Distribution of cities with different trajectories of population change
Explanation: 0 – cities excluded from classification; 1 – continuous decline; 2 – long-term decline; 3 – resurgence; 4 – disturbed growth; 5 – slow growth; 6 – moderate growth; 7 – fast growth

Source: Authors' calculations based on the Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

POPULATION OF AMERICAN CITIES: 1950-2009

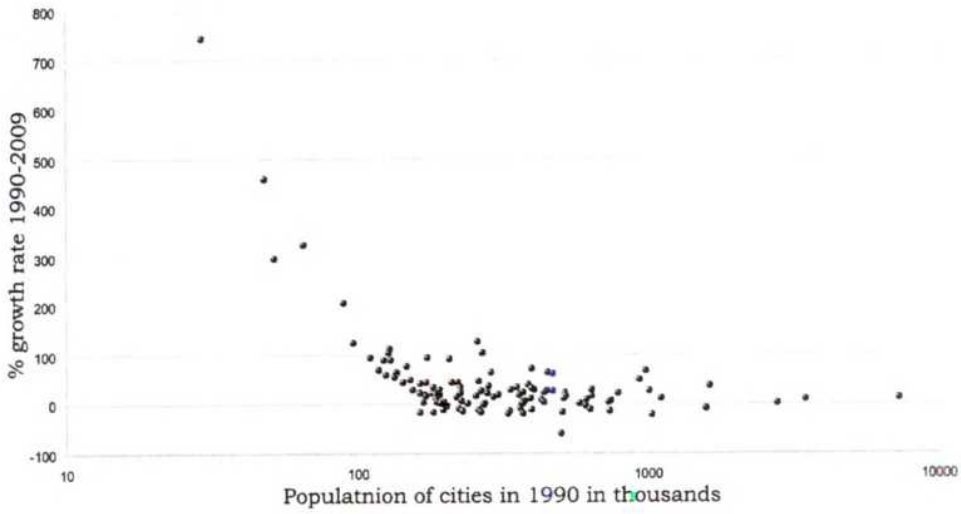


Fig. 11. Relationship between city size and growth rate, 1990–2009

Source: Authors' elaboration based on Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009



Fig. 12. Abandoned housing estate in Detroit

Source: <http://www.justmeans.com/Open-Season-for-Social-Enterprises-a-New-Future-for-Detroit/10597.html>

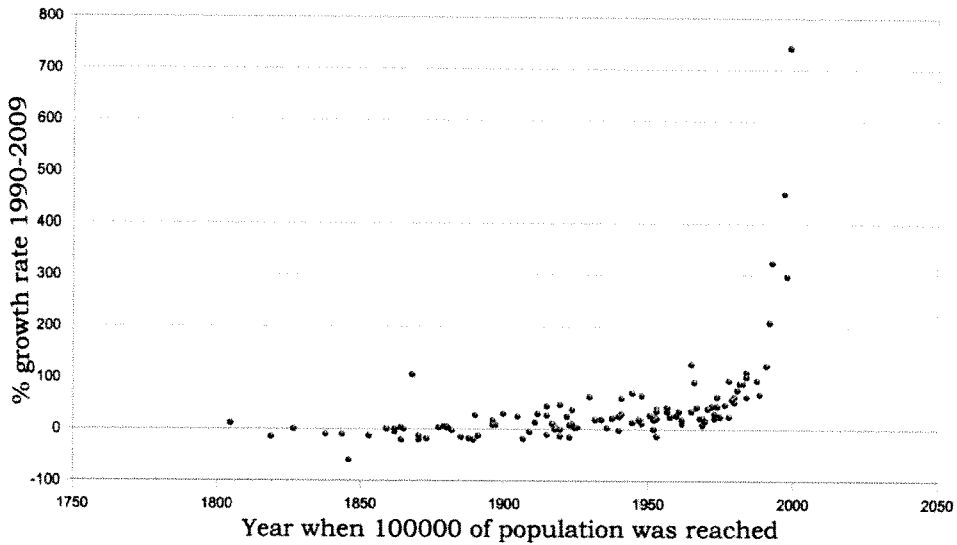


Fig. 13. Relationship between the time when cities reached population 100,000 and their current growth rates

Source: Authors' elaboration based on Decennial Censuses and the Population Estimates Program, U.S. Census Bureau, U.S. Department of Commerce, 2009

social consciousness and no longer the big is taken simultaneously as the best. Numerous parts of American big cities are being demolished and people seem to be inclined to accept the idea that 'Demolition means progress' (see Fig. 12). Differences between the East and the West suggest also that the important factor influencing the population change in cities can be their age. Declining cities are not only bigger than the growing ones, but they are simultaneously older (see Fig. 13). Growth of older cities is often hampered by the decline of former dominant industries and by physical constraints on land availability. The abundance of free land in newly established cities of the West, like Irvine, shows to be a stronger attraction for investors than the incentives from the sides of such cities like Detroit or Buffalo, which try to change the stereotype of the Rust Belt cities by making them small and green.

CONCLUSIONS

American cities showed to be extremely sensitive to the general economic prosperity. The most important turning point in their recent history was the energetic crisis in 1970s. This decade most of them reduced their growth rates and one third of them experienced even the absolute decline.

Recent positive change in the fortunes of American cities should be interpreted as a reflection of the structural shift that is occurring towards a more services-oriented economy and smaller households.

Important differences between the old industrial North and Midwest on the one hand, and the West and South on the other show that the distinction of the Rust Belt and Sun Belt is still valid. Numerous cities of Rust Belt have lost significant numbers of inhabitants and their decline is going to be stopped. Simultaneously, the growth rates of the Sun Belt cities are gradually reduced and there appear no newly established, highly dynamic mushroom-cities. This leads to the more stable situation in which both excessively fast growth and radical decline disappear.

Stabilization process is accompanied by cultural change, particularly in the Rust Belt. Shrinking cities, depopulation, and lately demolition of vast industrial and housing estates are the landscape equivalent of the radical shift in the sphere of social consciousness. The traditional American stereotype, according to which the positive meaning was assigned only to phenomena that were growing or increasing, seems to be approaching to its end. The new slogans according to which the small can also be good, demolition can mean progress, and green is beautiful, begin to gain space in the social consciousness of the expansive American society.

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TPOLOGY OF SUBURBAN COMMUNITIES IN POLAND

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ABSTRACT. The paper presents an attempt to classify new and existing suburban communities in Poland based on spatial patterns and comparisons with suburbs in the United States. Fifteen types of Polish suburban communities are identified in the paper. As large-scale suburban development is a relatively new phenomenon in Poland, most Polish suburban communities will continue to evolve over time and make the transition from one community type to another. An understanding of each type of suburban community may help local governments assist the communities they serve in the process of creating infrastructure and jobs for a growing population.

KEY WORDS: Poland, suburbanization, suburban communities, cities, types, clusters.

INTRODUCTION

The purpose of the paper is to describe fifteen types of new and older suburban communities rising across Poland since the 1990s. The emergence of large suburban communities of virtually identical single-family homes is a relatively new phenomenon in Poland. Prior to 1990, small suburban communities did emerge on the outskirts of major cities in Poland (Jakóbczyk-Gryszkiewicz, 1998). However, the vast majority of suburban homes at the time were built by private individuals and usually did not involve a comprehensive community plan created by a developer. Furthermore, the overall quality of suburban homes built prior to 1990 was much lower than what is available today. In order to sensibly analyze suburban development in Poland, it is necessary to define what it means to be a city or suburb in Poland. While most large cities in the United States ceased to expand their administrative boundaries in the early 20th century (Winling, 2006), their counterparts in Poland continued to significantly expand their boundaries well into the 1980s (Szymańska et al., 2009). As a result, city limits in

Poland encompass former suburbs as well as large swaths of undeveloped land. This creates a fundamental problem when attempting to define 'the suburbs' in Poland. However, if it can be assumed that the administrative boundaries of cities in Poland are relatively fixed for the time being, then a tentative definition of 'Polish suburbs' may be formulated.

Large-scale 'homogeneous' suburban development is primarily a North American phenomenon. Large suburban communities of middle and upper class homes do exist in Western Europe, Australia and New Zealand, however, the sheer scale of suburbanization in North America remains unmatched. For this very reason, it is important to compare suburban development in Poland to that in North America – specifically the United States. Suburban communities in the United States have been evolving since the late 19th century. One of the better examples of this is the Philadelphia Main Line, which evolved as an affluent suburb in the 19th century along a key railroad line and has largely retained its privileged status until this day. It is important to note that early suburbs in the United States were built primarily for affluent families and not for mainstream society. The rate of suburban development in the United States increased rather rapidly following World War II and was driven by a number of factors including major government incentives (e.g., Servicemen's Readjustment Act of 1944), the postwar baby boom, a steady increase in automobile ownership, the creation of the interstate highway system and a generally rising level of income in the United States due to an expanding postwar economy supplying war-ravaged European countries. Other key factors included the influx of African Americans from the largely rural South (Boustan, 2006) to historically 'white' cities in the North as well a rise in violent crime and illegal drug use in major cities. Some researchers argue that suburbanization in the United States in the 20th century was a much more complex process (Mieszkowski, Mills, 1993; Kim, 2007), while others argue that it was rather simple (Glaeser, Kahn, 2003). Suburbanization may also be viewed as an intrinsic stage of urban evolution regardless of geographic location (Anas et al., 1997). On a practical level, however, postwar suburbanization in the United States was unique in that it became available to the average American citizen. In addition to create a variety of tangible quality-of-life benefits, large-scale suburbanization has also created certain public sector costs including increased car-derived air pollution and loss of potential farmland, which have made it socially less desirable (Persky, Wiewel, 1996). Ultimately, in order to make meaningful comparisons between suburbanization in the United States and that in Poland, it is necessary to briefly review a few key issues in modern Polish history.

The year 1989 is important in the history of modern Poland, as it was the starting point for the nation's politically challenging transition from

a centrally-planned economy to a free market economy. This fundamental economic and political shift is often termed a 'system transformation' in the Polish research literature (Zborowski, 2005). This shift helped stimulate what is known in the research literature as the decentralization of urbanization processes (Lisowski, Grochowski, 2008). Poland's system transformation prompted the emergence of privately-owned construction companies, which began to build planned suburban communities that resemble American suburban communities. Prior to 1990, suburban communities in Poland emerged largely at random and included two types of residents: (a) affluent families that wished to have more space and amenities than what cooperative housing in large cities could offer; (b) average citizens who had built their own homes over the course of several years using their personal savings and the help of friends and family. However, most average Polish citizens at the time did not possess enough personal savings to build their own homes. As a result, most urban area residents were 'forced' to live in public housing built by socialist cooperatives that may be best described as large high-rise apartment communities – colloquially known as *blokowiska* in Polish (pronounced 'blocko-veeskah' in British English). The singular form of *blokowiska* is *blokowisko* (pronounced 'blocko-veeskoh' in British English). *Blokowiska* are often referred to as 'large multi-family housing estates' in the Polish research literature (Zborowski, 2005).

KEY DEFINITIONS

It is very difficult to formulate a universal definition of the city, the suburbs and rural areas. It is important to note that cities, suburbs and rural areas have evolved differently in Europe, North America and other parts of the world. Therefore, no standard definition of the city, the suburbs and rural areas may be reasonably believed to be applicable in every given geographic context. Reasonably unique definitions may be formulated for the following seven quasi-geographic regions: (a) Northwestern Europe; (b) Mediterranean Europe; (c) Central and Eastern Europe; (d) United States, Canada, Australia, and New Zealand; (e) Russian Federation; (f) People's Republic of China; and (g) Japan, South Korea and other developed East Asian nations. Several additional definitions could be formulated for other parts of the world. Next, it is important to look at the language of the place being considered in order to understand it properly and compare it sensibly to other geographic contexts. In the United States and Canada, the term *village* is generally used to describe a small town that may or may not be incorporated (i.e., possess a legal status). In many cases, the term *village* has no legal meaning and may actually describe an upscale suburban community or shopping area.

In Europe – including Poland – the term *village* has a very long history and one usually associated with agriculture. In Poland, the word *village* is also an administrative term that identifies an arguably small developed and inhabited area with established boundaries. In the paper, the word *village* is used in the Polish sense.

In order to sensibly compare suburban development in Poland to that in the United States, the very concept of the city, the suburbs and rural areas must first be defined in each case. The definitions produced for the United States also largely apply to Canada, Australia and New Zealand. The definitions offered in this paper are based on demographics and morphology. Other types of definitions are also plausible (function-based, transportation-based, heat-based). A large city – as defined for Poland – is a contiguous developed and inhabited area featuring closely-spaced multi-family units housing most of its population and a mean population density of 2,600 inhabitants per square kilometre. The true mean population density is actually much larger, given that cities in Poland possess large uninhabited areas within their administrative boundaries. The suburbs are defined as a semi-contiguous developed and inhabited area featuring uniformly dispersed single-family units housing most of the population and a mean population density of 200 inhabitants per square kilometre. Rural areas are defined as developed and undeveloped inhabited areas featuring non-uniformly dispersed single-family units housing most of the population and a mean population density of 100 inhabitants per square kilometre. The population data were obtained from the Central Statistical Office of Poland (Polish acronym: GUS). Finally, it is important to note that the spatial distribution of the inhabitants of suburban and rural areas in Poland still revolves around the European/Polish concept of a village.

A large city – as defined for the United States – is a contiguous developed and inhabited area featuring closely-spaced and uniformly dispersed single-family units housing most of its population and a mean population density of 3,000 inhabitants per square kilometre. This definition deliberately ignores the few large *blokowiska* – called public housing projects in American English – that do exist in some American cities including New York and Chicago. The mean population density for the large American city reflects city limits that usually do not include large swaths of empty land. The suburbs are defined as a semi-contiguous developed and inhabited area featuring uniformly dispersed single-family units housing most of the population and a mean population density of 300 inhabitants per square kilometre. Rural areas are defined as developed and undeveloped inhabited areas featuring both non-uniformly and completely randomly dispersed single-family units housing most of the population and a mean population density of 10 inhabitants per square kilometre. It is important to note that the population densities for the United States are based on 1990 data for Connecticut – a state that

resembles many European countries in terms of population density (Berentsen et al., 2000, with changes). What the definitions do not show is scale. While so-called suburban sprawl can be observed virtually everywhere in the United States, the same cannot be said of Poland in 2011. Another meaningful difference is where people work. While American suburbanites usually commute to work, the same is not necessarily true in Poland. This is an area that deserves further study. Finally, a minor difference that is discussed later in the paper is the issue of 'suburbs in the city' in Poland.

DATA SOURCES AND METHODS

The paper is based on the visual inspection of aerial photographs and satellite images provided free of charge to all Internet users by the Google Corporation of Mountain View, CA (United States) and Grupa Onet.pl SA of Kraków (Poland). The online service offered by Google is called Google Maps. The online service offered by Onet is called Zumi. Both Google Maps and Zumi offer high quality aerial photographs and satellite images, however, Zumi tends to offer slightly higher resolution images for most major cities in Poland. This is advantageous when reviewing fine details such as suburban landscaping, street surface quality and roof geometry. High resolution is important when attempting to determine whether a given home is relatively new or not, whether a yard is carefully maintained or not, as well as other details that help in the classification of homes and entire communities. Google and Zumi images were visually inspected online for the following five large and midsize cities in Poland (2010 population data in parentheses – city population only): Warsaw (1,720,000), Kraków (750,000), Wrocław (630,000), Poznań (560,000), and Częstochowa (240,000).

Residential communities located both outside and inside city limits were designated as suburban or suburban-type based on the following types of observations: overall geometry of homes, types of landscaping, signs of agriculture, street patterns, street surface quality, distance to major roads, and distance to city hall. The approximate locations of the communities used as examples are provided in the paper. Homes – as shown on aerial photographs – were visually inspected for the following three features – roof geometry, roof colour and overall building geometry. Homes built before 1990 are usually box-shaped and feature either a flat square or rectangular roof or a simple gable or hip roof. Most pre-1990 roofs are either pale or dark grey and only occasionally red or orange. Most post-1990 roofs are orange, red, dark blue or brown. Homes built after 1990 are normally characterized by a variety of complex shapes (T-shaped, C-shaped, L-shaped, stair-shaped, cross-shaped, jagged rectangle) and usually

feature complex variations of gable and hip roofs. Roof geometry and overall building geometry were two key criteria used to identify the approximate age of homes. Current real estate data for Poland available online (oferty.net) were used to verify the geometric assumptions used in the paper.

Another key measure of suburban development in Poland is landscaping and general property maintenance. Lawns, trees, bushes, flowerbeds, hedgerows, driveways, and sidewalks are well-maintained in new suburban communities and virtually nowhere else. Yards and gardens were visually inspected for landscaping including mowed lawns and neat flowerbeds. Other spatial patterns were also examined including the spacing of homes, lot size, sidewalk quality, driveway geometry, and surface type. The explicit presence of agricultural activity was assumed to be a sign of ‘non-suburbanization’. Street networks were visually inspected for street length, width, curvature, connectedness as well as the presence of high quality sidewalks and street surfaces (i.e., free of visible structural defects). Other characteristic signs of suburbanization were also considered including the distance of homes to major roads and the distance of entire communities to city hall – a non-arbitrary central point in every city – called *urząd miasta* in Polish (pronounced ‘oozhohnt myahstah’ in American English). Finally, it is important to note that when the term *suburban community* is used in the paper, it is intended to mean *a community of single-family homes, row homes and twin homes*, unless multi-family housing (i.e., apartments) is explicitly mentioned.

TYPES OF SUBURBAN COMMUNITIES

Fifteen types of suburban communities were identified for five major cities in Poland. The cities studied ranged from 1.7 million inhabitants to just under a quarter million. Each city possesses a fairly different history of political and economic development. Warsaw, as the capital of Poland, enjoys a rather unique advantage in terms of attracting business investment and university-educated individuals. The city was completely destroyed during World War II. Kraków is considered the cultural capital of Poland and a major centre of learning. The city suffered little damage during the war. Wrocław and Poznań are both known for attracting major Polish and foreign corporations. Poznań suffered some damage during the war, while Wrocław was completely destroyed. Częstochowa is considered the spiritual capital of Poland thanks to the Roman Catholic Shrine of Jasna Góra. The city was not damaged during the war. The five cities possess one common characteristic – all five boast very large *blokowiska* built prior to 1990. In order to simplify nomenclature, the prefixes *macro* and *micro* are used in the paper to mean *large-scale* and *small-scale*. Fig. 1 and 2 show the fifteen types of new

and older suburban communities identified in Poland in 2011. Each community type is designated using the letter 'T' and an assigned number (e.g., T5).

The first type of suburban community (T1) identified in Poland is a new macro-community detached from existing towns and villages (Fig. 1). This type of suburban community is large by Polish standards, with an area of 20 to 40 hectares. T1 communities are built by developers, possess a regular street network, paved streets, sidewalks, a variety of home styles, and well-maintained yards and gardens. This type of suburban community is still quite rare in Poland – in part because of the costs associated with extending infrastructure (water, sewer, power, Internet). An example of a T1 community is a new triangle-shaped suburban community rising about 2 kilometres northeast of Smolec – a large village located 8 kilometres southwest of central Wrocław. This particular T1 community resembles what may be described as a New Urbanist design (Lewyn, 2006), with a variety of different types of homes and apartment buildings.

The second type of suburban community (T2) identified in Poland is a new macro-community attached to an existing town or village (Fig. 1). This type of suburban community is also large by Polish standards and its close proximity to a village or town is often driven by the need to easily connect to infrastructure. T2 communities are built by developers and possess most of the characteristics of T1 communities but are more numerous. One reason for this is that zoning laws tend to favour T2 communities. An example of a T2 community is a new rectangle-shaped suburban community in Skórzewo – a village located 11 kilometres southwest of central Poznań. Another example of a T2 community is a new rectangle-shaped suburban community in Suchy Las – a village located 8 kilometres northwest of central Poznań. The Suchy Las suburban community is a rather good example of what may be termed a Polish New Urbanist community and includes a variety of different home sizes and types (including apartments).

The third type of suburban community (T3) identified in Poland is a new midsize community (5–20 hectares) attached to an existing town or village (Fig. 1). T3 communities can be said to evolve from T4 communities into T2 communities over time, and are quite common in Poland. An example of a T3 community is a new square-shaped suburban community in northeastern Węgrzce – a village located 8 kilometres north of central Kraków. The fourth type of suburban community (T4) identified in Poland is a new micro-community attached to an existing town or village (Fig. 1). This type of suburban community is very small, with an area of less than five hectares. T4 communities are normally offshoots of existing towns and villages but are built by developers. This type of community usually consists of a single paved street with standard sidewalks as well as virtually identical homes and well-maintained yards and gardens. T4 communities are very common in Poland – in part because they can

easily connect to local infrastructure and can be built on small parcels of land. An example of a T4 community is a new linear suburban community in southern Bibice – a village located 8 kilometres north of central Kraków.

The fifth type of suburban community (T5) identified in Poland is a new micro-community in the form of an infill in an existing town or village (Fig. 1). This type of suburban community closely resembles a T4 suburban community. One simple reason for the existence of a T5 community – as opposed to a T4 community – is zoning laws. It is usually easier to create an infill simply because the land under the infill is already zoned for residential construction. There is, however, an inherent disadvantage with a T5 community. The new residents of a T5 community often have no choice but to look at older and usually poorly-maintained homes and yards, which lowers their general quality of life and the resale value of their property. An example of a T5 community is a new linear suburban community in western Zabierzów – a ‘town-sized’ village (5,000 inhabitants) located 13 kilometres northwest of central Kraków. While it is possible that a mosaic of T5 communities in a town or village will prompt older residents to upgrade their homes and yards, that possibility is merely a possibility and may take years to materialize.

The sixth type of suburbanization (T6) identified in Poland is technically not suburbanization at all (Fig. 2). It is the direct result of the shifting boundaries of cities in Poland. T6 macro-communities are found in large cities, which have annexed large swaths of empty land in the previous five or six decades. T6 homes are not all built by one developer and tend to be scattered across empty fields in small clusters. Each cluster tends to grow over time, which eventually leads to coalescence. A T6 community does not have the homogeneous appearance typical of a T1 or T2 suburban community. Examples of T6 communities include central and southern Białoleka in Warsaw. The seventh type of suburban community identified in Poland is a new dispersed macro-community attached to an existing town or village (T7). In spatial terms, a T7 community is virtually a mirror image of a T6 community but is located outside city limits. In other words, a T7 community fits the American definition of a suburban community, whereas a T6 community does not. An example of a T7 community is a new dispersed suburban community in Bobrowiec – a village located 19 kilometres south of central Warsaw.

The eighth type of suburbanization (T8) identified in Poland consists of new suburban homes randomly scattered across an existing town or village (Fig. 2). T8 communities are mosaic in appearance and tend to coalesce over time, which results in a T7 community in some instances. An example of a T8 community is Tyniec Mały – a village located 13 kilometres southwest of central Wrocław. New suburban homes scattered among older rural and box-shaped homes are

TYPOLOGY OF SUBURBAN COMMUNITIES IN POLAND

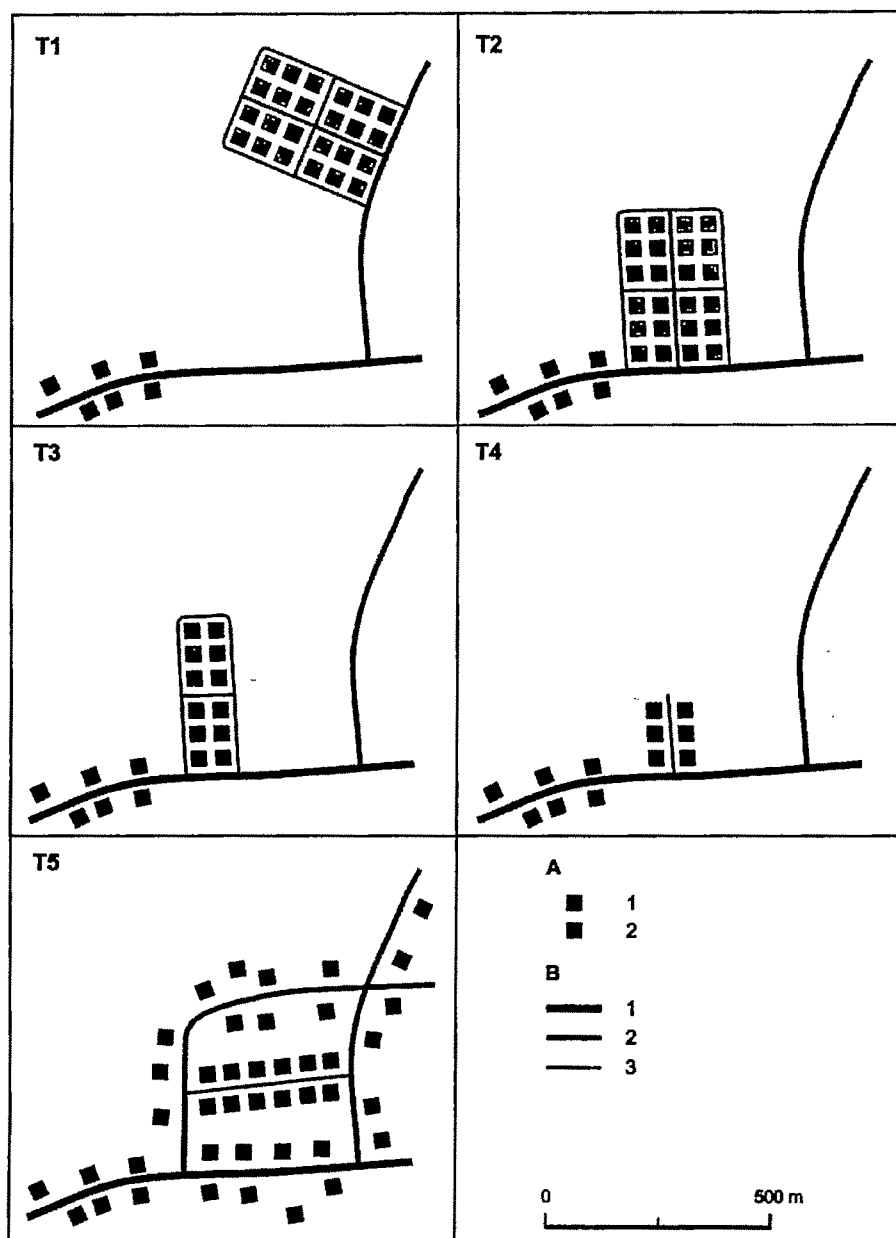


Fig. 1. Selected types of suburban communities in Poland

Explanation: A – types of building; 1 – new single-family homes; 2 – old single-family homes; B – road types; 1 – main roads; 2 – local roads; 3 – residential streets

Source: Author's work

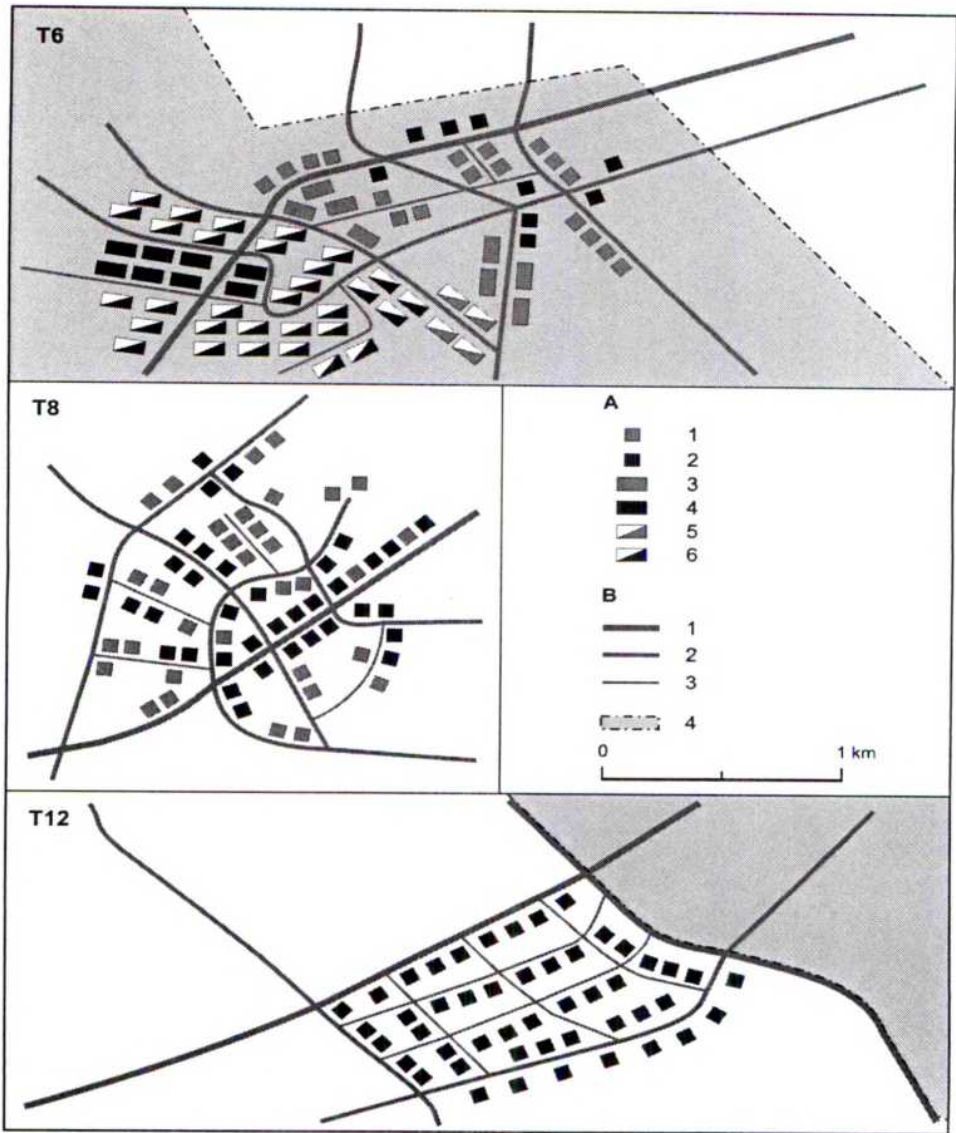


Fig. 2. Suburban communities in Poland – selected types

Explanation: A – types of buildings; 1 – new single-family homes; 2 – old single-family homes; 3 – new low-rise apartment buildings; 4 – old low-rise apartment buildings; 5 – new high-rise apartment buildings; 6 – old high-rise apartment buildings; B – road types; 1 – main roads; 2 – local roads; 3 – residential streets; 4 – the city

Source: Author's work

usually built by private individuals taking advantage of favourable residential zoning laws. Suburban communities T1 through T7 are the predominant types of suburban communities emerging in present-day Poland and tend to evolve in a manner analogous to that in the United States. One major difference with the United States is how T7 communities evolve at the earliest of stages. In Poland, T8 mosaics of suburban homes often coalesce to form T7 communities, while in the United States, T7-type communities generally arise from larger clusters of suburban homes built by several different developers. The remaining seven types of suburban communities identified in Poland (T9 through T15) are rare and usually do not fit the standard American definition of suburban communities.

The Polish countryside has changed substantially since 1990 both in terms of its role in agriculture and its role as the home of millions of rural families. Rural areas located within a 30 kilometre radius of large cities (over 200,000 inhabitants) are slowly transforming from agricultural areas to suburban areas – even if the suburbanization taking place there does not fit the standard American definition. Older rural-type homes are being renovated to meet or exceed American suburban housing quality standards defined as the ownership of single-family multi-bedroom homes featuring modern-day conveniences (hardwood floors, one or more full bathrooms, kitchen appliances, the Internet, insulated windows, entertainment systems) and surrounded by properly landscaped yards and gardens. This may be designated T9 suburbanization. As villages close to large cities abandon agriculture and their inhabitants pursue non-agricultural jobs, the traditional village lifestyle becomes a relic of the past (Gonda-Soroczyńska, 2009a, 2009b). Villages in Poland are slowly becoming small towns, at least based on the American definition of a small town as ‘any isolated cluster of homes with a general store or some other small business’.

One key difference between American small towns and Polish suburban area villages is the role of home renovation. Most American small towns feature a certain number of older homes and new suburban-type homes built by developers. Older homes in American small towns are usually well-maintained and do not need to be renovated. In Poland, on the other hand, rural-type homes close to large cities are being renovated to meet suburban quality standards. Many rural homes in Poland are making the transition from substandard housing to American suburban quality housing featuring large semi-luxury bathrooms, high quality floors and artistic landscaping. It is important to note that the term *American suburban quality* is not a reference to construction technology. A close relative of T9 suburbanization is T10 suburbanization, which is the emergence of ‘upgraded rural’ or ‘pseudo-suburban’ communities of renovated rural-type homes that do not meet American suburban quality housing standards. T10-type homes usually possess some modern features such as new wooden-type floors

instead of linoleum floors as well as new electrical wiring, Internet service and new exterior paint, however, their overall quality does not match that of American suburban homes.

One of the key issues complicating the classification of Polish residential communities as suburban or not suburban is the issue of changing city limits. Large cities in Poland had continued to significantly expand their boundaries as late as the 1980s. Many suburbs as well as empty areas were annexed by large cities. As a result, some parts of cities in Poland resemble American-type suburbs and other parts consist of wooded areas and meadows. For this reason, Polish geographers frequently tend to put forth a morphological argument to designate parts of Polish cities as 'suburbs' (Zborowski, 2005). The argument is based on the idea that suburbs are a new form of settlement that exists outside the central city and may or may not be located within present-day city limits. This certainly violates the American definition of suburbanization. What this argument does, however, is suggest that suburbanization processes are – to some degree – location-specific. Hence, former suburbs now located within city limits may be designated T11 suburbs. This type of 'neo-suburban' community includes rural-type homes as well as estate-type homes that tend to resemble – for example – those of the Main Line located west of Philadelphia. An example of a T11 community is the Wawer section of Warsaw – a formerly suburban community located 8 kilometres southeast of central Warsaw. However, the predominant type of home found in most T11 communities is a box-shaped home colloquially known as a *klocek* in Polish (pronounced 'kloh-tsek' in British English). The plural of *klocek* is *klocki* (pronounced 'kloh-tskee' in British English). The vast majority of *klocki* were built between 1945 and 1989 during Poland's communist era when homes were designed by government architects for whom style was not exactly a top priority. The same is true of T12 communities – older suburban communities built prior to 1990 (Fig. 2). Today, T12 communities remain outside city limits and normally consist of different varieties of *klocki*. Street patterns in T12 communities resemble those in the United States, with regular grids or slightly curving parallel streets. An example of a T12 suburban community is Przeźmierowo – a 'town-sized' village (6,000 inhabitants) located 10 kilometres northwest of central Poznań.

A still fairly rare – but becoming more common – type of pseudo-suburbanization in Poland is a new low-rise apartment community located within city limits (T13). This new community type violates the American definition of suburbanization but it does reflect the reality in Poland – the reality being that cities annex suburban areas and suburban-type communities are then built 'in the city'. T13 communities tend to resemble New Urbanist communities in the United States in terms of architectural style and amenities available (Ford, 2009). Most T13 communities lease ground floor space to service-oriented businesses, which

reduces the amount of driving for T13 residents. An example of a T13 community is a new rectangle-shaped apartment community in the southern Bronowice Małe, section of Kraków. The final two types of suburban communities are very rare in Poland. New macro-communities of suburban homes located more than 5 kilometres from the nearest cluster of metropolitan area suburban homes can be found at a small number of sites in Poland. This type of exurban community may be designated T14. It is important to note that the phrase *metropolitan area* is being used here in the American sense to mean the total inhabited area of any large or midsize city. In Poland, a *metropolitan area* is actually a legal term whose closest equivalent would be the American expression *large metropolitan statistical area*. T14 communities tend to consist of new American suburban quality homes that stand in stark contrast to any other homes found in their general vicinity. An example of a T14 community is a square-shaped exurban community of homes built in the middle of a forest located 5 kilometres east of the Wrzosowa suburb of Częstochowa. A closely related type of suburban development is the construction of estate homes across suburban areas and more distant rural-type areas. Homes of this type may be designated T15. Estate homes are normally custom-built for affluent families and do not form clusters. As the number of affluent families in Poland remains rather small, the number of estate homes remains rather small. Definitions of affluence vary but a net household worth of one million U.S. dollars may be assumed to be a reasonable minimum requirement.

CONCLUSIONS

A major difference between suburban communities in Poland and those found in the United States is the concept of the *suburban neighbourhood* or *subdivision* as it is called in American English. The equivalent Polish term for *subdivision* is *osiedle* (pronounced 'oh-shed-leh' in American English). It is important to note that the term *osiedle* is often used as a synonym for *blokowisko*. The majority of American suburbs are between twenty and sixty years old. The majority of Polish suburbs are less than twenty years old, which may be considered an early growth stage. Consequently, the average Polish suburban subdivision is at least five times smaller than the average American suburban subdivision. Most suburban areas in Poland do not feature large subdivisions but merely fragments that may coalesce over time. Most new suburban communities in Poland consist of several short streets. Hence, the very concept of a *suburban neighbourhood* or *suburban subdivision* is still new in Poland. In fact, the term *suburbs* is still rarely used in Poland outside of academic circles. Most suburbanites in Poland insist they live in a village or in the countryside. The small size of new suburban communities

in Poland makes it difficult for most individuals to mentally connect them into a larger whole.

Another key consequence of the highly fragmented nature of new suburban communities in Poland is the issue of quality of life. When small suburban communities are built next to much older *klocki* or old rural-type homes, the quality of life for the new suburban residents is lower than it would be if new suburban communities were much larger. A child cannot ride a bicycle to school through a new suburban community in Poland because the community is not large enough to have its own school. Further research is needed to calculate rates of suburban development for key metropolitan areas in Poland, which would help local governments anticipate infrastructure needs and job market trends (Glaeser, Kahn, 2001). This type of forward-looking data could also be used in the planning of transit oriented development (Zwick, 2009; Goodwill, Hendricks, 2002).

In summary, fifteen types of suburban communities have been identified in Poland – most of which are new types of communities. The three most common types of new suburban communities in Poland (T2, T3, T4) are macro- and micro-communities as well as midsize communities of single-family homes, row homes and twin homes attached to suburban area villages that provide a link to infrastructure. Local zoning laws tend to favour ‘attached communities’ rather than ‘greenfield communities’ for a variety of different reasons including environmental considerations (i.e., altered surface runoff patterns, Burns et al., 2005) and the fear of suburban sprawl. Mosaic-type suburban communities are also quite common in Poland (T6, T7, T8) and are expected to coalesce over time into T3 and T2 communities. In fact, mosaic-type suburban communities may be labeled as ‘typical’ Polish suburban communities as of 2011. This may change over time. The type of suburban development that has not yet taken root in Poland is transit oriented development. This is an area that needs further study. The key challenge for local governments is to create infrastructure in order to facilitate the spatial growth of nascent suburban communities. If local governments are able to spend enough money on new infrastructure, the resulting benefits will be a more affluent tax base and a modern society setting social and economic standards for Poland as a whole.

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